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CURING TOBACCO.

Dr. H. Claggett was applied to for information on the above subject, and wrote the following letter. As it treats on a matter of great importance to Tobacco Culturists, we take pleasure in publishing it.

"I have not been engaged in raising tobacco for many years; but as I was raised in a part of the country where it was an important crop, and where the planters, by the accumulated experience of several generations, had reached a high degree of perfection in its management; and as I was extensively engaged in its cultivation before leaving Maryland—I may be able to give you all the information you require, so far as it can be communicated on paper.

Presuming the tobacco to be housed, I shall commence with the next process. Being well protected from the weather, it should remain hanging up in the house till thoroughly dry, which you will ascertain by doubling the stems in dry weather—if properly dried the stems will break.

The next thing to be done is to strip the leaves from the stalk and tie them in bundles. In this process, the different qualities should be separated; this can only be done in damp weather, when the leaves are sufficiently soft to handle without breaking. When about to commence stripping, the stalks are to be taken from the sticks and laid in a pile. The first hand will take off all the weather-beaten leaves at the bottom of the stalk (there will generally be two or three leaves of this sort which are readily distinguished from the prime leaves); the stalk is then passed to the next hand, who should take off all the prime leaves, and pass it to the next to take off the top, imperfectly matured leaves; each one tying them up in neat bundles as they proceed. This will make three distinct grades, which are to be kept separate in all the after processes. In a large crop a greater number of grades may be made according as the quality may vary. The keeping of each grade separate, is of special importance, as the mixing of a small quantity of inferior or imperfectly ripened with the prime leaf, will seriously affect its value. All that is stripped, at the close of the day, should be put upon the sticks, and hung up again in the house, to remain there till the whole crop is stripped, or till there is enough to make a bulk.

When the bulking process is commenced, it is very important that it should be in proper condition. When in condition to strip it is too moist to put in bulk. After the bundles hanging up have been dry, they will first become soft, or damp, in damp weather, on the outside. They should be put down in bulk when they

are barely damp enough to handle without breaking. This condition is indicated when the bundles are elastic, and will slightly rattle under pressure in the inner portion. The bulking down in proper condition is of great importance, for if put down too damp, (or as planters term it, in too high case,) it will mold in the bulk, while going through the sweat—more properly speaking the process of fermentation. The proper passing of the tobacco through this process in bulk before packing it for market, is very important: it improves the flavor and aroma of the tobacco, and is necessary to prevent it from molding after the final packing—which should also be done as dry as it can be done without breaking.

A large amount of tobacco is annually brought to the St. Louis market in a damaged condition by neglecting to give proper attention to these two processes, and many thousand of dollars are thus lost annually to the planters.

The bulk should be made on a platform two or more feet above the ground, which may be made with boards or tobacco sticks laid upon rails or poles; it should be between three and four feet wide, and the length governed by the quantity to be put down. There should be four layers of bundles, the tied ends outward; the two inner layers should lap on the outer and on each other about one-third their length. The hand putting down the bulk should go upon the bulk upon his knees, putting down regularly layer after layer alternately the outer and inner layers, following round with his knees upon the bundles as they are put down, having another hand to hand him the bundles. The bulk may be carried up from three to five feet high according to the quantity you may have. It is not necessary that it should be all done at one time, but may be added to from time to time as the tobacco is found in condition; but a great length of time should not elapse between the commencement and completion of the bulk, as it would affect the uniformity of the fermenting process. When the bulk is finished, some weight should be put on the top—a layer of tobacco sticks and a few rails will answer. After the bulk has been down a few weeks, it is proper to examine the interior, by raising it in several places and drawing bundles from the inner layers, to see if there is any mold appearing. This examination may be made several times till it has passed through the fermenting process; and if there should be found any indication of molding, it should be hung up again, dried off, and again repacked. All that has been bulked down before the first of March, will generally be fit to pack for market in May.—When packing commences, any that may be found moldy, if the structure of the leaf is not injured, may be restored by spreading it out in the sun, and taking it in in the evening as soon as it is sufficiently soft to handle.

Heavy, gummy tobacco, that has not been cured by fire, requires great care to carry it safely through the fermenting process; and even the best planters will sometimes find some a little moldy in the bulk; but where it is but slight, it can be reclaimed as above-mentioned."

ESSAY ON HEMP CULTURE.

BY L. J. BRADFORD, OF AUGUSTA, KY.

[Concluded.]

RIPENING AND HARVESTING.

The maturity of the crop is indicated by a change of color in the leaf, it gradually changing from a deep green to a paler hue, also a shedding of the leaves, beginning at the bottom of the leaves and gradually extending up the stalk.

The male plants ripen fully ten days in advance of the female, and in some countries where labor is worth next to nothing, the male is first harvested by being drawn up by the roots, the female being left standing; in our country, such a mode of harvesting is impracticable; hence, the American grower must divide the time as near as may be between the earlier and later ripening, and thus secure the best results possible under the circumstances. The male plant is covered with very minute pods bearing pollen, which at maturity burst and fill the whole atmosphere. It may be seen when the crop is stirred by a brisk breeze rising in immense clouds and floating away from the field. When this is seen, in addition to the indications previously named, the crop is ready for the knife.

This instrument is of a peculiar shape, perfected by long experience, and need not here be described, as they can be purchased in the hemp region of Kentucky of almost any smith. The ancient manner of harvesting was by pulling as with flax, but this mode has long since been abandoned in favor of the hemp hook, as the knife is called. Of late years, J. B. Cormick, of St. Louis, Mo., and Versailles, Ky., has patented hemp cutting machinery as an attachment to the McCormick Reaper. The writer has used the attachment and considers it a perfect success; it will supersede the hook in all level lands, and must prove well adapted to Iowa use. In Kentucky some of her best hemp

lands lie so rolling and rough as to perhaps preclude its use. If the crop is to be cut with the hook, the operator is required to cut at once through a width corresponding to the length of the hemp and as close to the ground as possible, spreading his hemp in his rear in an even, smooth swath, where it remains exposed to the sun's rays until it is properly cured and the leaves sufficiently dried to detach easily. This last operation is sometimes omitted by careless growers, and some contend without injury.—The hemp can be shocked or *stooked* (as the Yankee would say) with more compactness without the leaves than with them, and any operation having an influence upon the future security of the staple from dampness or atmospheric influence is certainly important; the perfect detachment of all the leaves should then in no wise be omitted. No time should be lost after the stalk is cured in getting the crop up and in neat shocks. Every additional day's exposure to sun, wind, rain or dew, is deteriorating its quality and subtracting from its quantity; the brighter the stalks can be secured, the better. The same rules will apply to hemp that obtain in securing good hay. The operator in taking up the hemp, uses a rude stick cut from the branches of the nearest tree, about the length and weight of a heavy hickory walking cane, taking care to use a fork of the branch as delineated. With this primitive, but very effective tool, he can rapidly draw the stalks into bunches of the proper size for sheaves. In operating, he throws his rude hook forward its full length, and suddenly draws it towards him, each motion making a bunch; this he raises quickly from the ground, and with his hook, by a few well directed strokes, divests the plant of its leaves; he then binds his sheaf with its own stalks and passes on to repeat the operation.—Other laborers follow, and place the hemp in neat, close shocks of convenient size, securing the top by a neat band made of hemp stalks themselves, after the manner of shocking corn. Here it is suffered to remain until the whole crop is thus secured; as soon thereafter as possible, selecting clear, dry weather for the operation, the whole crop is to be secured by ricking or stacking.

The same rules are to be observed in stacking as with grain; the object being to keep the crop secure and dry until the proper time for rotting arrives; in the latitude of Kentucky, about the middle of October is the proper time. The crop must be retained in the rick or stack, until the summer heats and rains have passed and frost appears instead of dew; the whole crop is then removed from the rick and re-hauled back on the same ground on which it grew, there to be spread in thin swaths for rotting, where it remains without turning until properly rotted. This is indicated by the fibre freely parting from the stalk, and the dissolution by the action of the elements of the peculiar substance that causes it to adhere thereto. This stage is only to be learned to perfection by practical experience, yet the novice must have some information to enable him to begin to learn, and it is easily acquired by any one the least observant. When the operator finds his hemp sufficiently rotted, the wooden hook is again brought into requisition for drawing once more the swaths into convenient bunches. The hemp will have lost much of its weight, and can be bunched and shocked with less labor than at first; besides, at this last shocking, the binding is to be omitted entirely; the hemp is to be carefully and neatly handled, all tangling to be avoided, and placed again in neat shocks and firmly bound at the top.

Then comes the last and crowning operation—the breaking and dressing the fibre or lint for market. The peculiar brake to be used, like the knife or hook for cutting, needs no description, they are manufactured in the old hemp regions at a cost of about $5 each, and from long experience have been perfectly adapted to the uses required. The new beginner would save time and money by ordering a sample brake, from which any carpenter can manufacture as desired. The crop is broken in this climate directly from the shock in the open field by the removal of the brake from shock to shock as fast as broken. In Iowa, owing to the severity of the climate, it would probably be necessary to remove the rotted hemp to the barn, where the labor of breaking could be more certainly performed The coldest and clearest weather is the best for this operation—in fact, excess of dampness in the atmosphere suspends this latter altogether. The breaking process is laborious, yet more depends on the skill than the strength of the laborer.

I have endeavored to describe the whole process as practiced by the best growers in Kentucky. The same mode will certainly apply to Iowa up to the rotting process. With her advantages, steeping in soft water is entirely practicable, by which she will produce an article of water-rotted hemp perhaps in no respect inferior to the highest priced Russian, which is fully

double the value of American dew-rotted, the only sort produced in this State. The writer is apprehensive that the seasons are too short in Minnesota, Wisconsin and Iowa, for the successful growth of seed, a defect easily remedied by the purchase of seeds grown in more Southern latitudes, but not a shadow of doubt exists in his mind that they can, at the very first effort, produce better hemp than any territory South. Time, he thinks, will demonstrate that Illinois, Iowa, Minnesota and Wisconsin compose the true hemp region of the American continent.

New Method of Suckering Tobacco.

ED. VALLEY FARMER: Last season I made an experiment on the tobacco plant, which I think ought to engage the attention of the raisers of the weed. I simply took the little blade of my knife and bored the suckers out of a number of plants; boring about a quarter of an inch downward, between the stalk and leaf. This effectually killed the suckers, so that they never came out. These plants grew more thrifty than others whose suckers were allowed to come out and then pulled off. I think I can sucker half as much in a day by this method as in in the ordinary way of pulling them off; besides I can begin from 5 to 8 days earlier, as this ought to be done just as the sucker begins to make its appearance above the surface of the bark at this stage of the plant. It is not necessary to more than gouge out the bud; but when the sucker gets a firm hold on the plant, it will require deeper boring. With an instrument made for the purpose, to fasten to the end of the forefinger, I think it will pay. O. GALBRAITH.

Halltown, Ill., Feb. 13, 1864.

A CROP OF CORN.

Moses Smith of Minden, N.Y., raised the following crop of corn the past year: From nine acres, he measured over 720 bushels of sound, hard corn. He grew it on an old meadow sod of twelve years' standing, without manure.—The sod was turned down in the spring and immediately planted; planted May 15th. A A handful of hen manure, with a little ashes and plaster, were put upon each hill before it came up. The soil was plowed eight inches deep; rows four feet apart both ways; five stalks in a hill, bearing from two to three ears to a stalk. The corn was the Dutton, good size. It was cut between the first and the middle of September. The cultivator was passed six times through each row, both ways, the hoe used to cut the weeds round the hills, and the soil slightly removed, instead of drawing it to the hill.

HEDGES.

It is with hedges precisely as with other things, they must be attended to—not put into the ground and then let alone: this, however, is the general practice; and the result is, irregularity in the hedge—some growing too fast, others too slow; weeds and grass spring up and choke the shrubs. In some places there are openings, just what is not wanted; sometimes they are eaten off, sometimes torn and destroyed (so with the arbor vitæ). All this is very discouraging.

A hedge, to be successful, must have careful attention. Now, who is willing to bestow this? He is the man to plant a hedge, and he only, if, indeed, a hedge is a profit at all, which some doubt, as its long roots extending on each side for many feet, absorb the vitality of the soil.

It is not in the planting where the difficulty lies. Attention afterward, and that *constant*, is the thing. A couple of yards on each side should be cultivated with the cultivator as one would corn, keeping out weeds, grasses, &c., and the ground mellow. This is the main point, as it will give uniform growth, just what is wanted. The trimming is but a small affair. But to keep the ground in order yearly is not so small a thing. A man, therefore, should consider this before he sets out a hedge. He should take example from the hedges of the country. Thus far they have proved almost a total failure. Only with care and expense of labor, will they answer the purpose of a fence—and then a good other fence is preferred, as the land can be tilled up to the fence—an impossibility with the hedge. Where labor is cheap, the thing is different; and even then there is the objection of the draft upon the soil. In England, where labor is cheap, and wood rare, many hedges are taken up—are considered a nuisance. It is only where necessity compels, that the hedge has any just claims. F.G.

[REMARKS.—[Our Publisher states that our correspondent is in error with respect to England—they are fond, if not proud of their hedges, especially is this so in Yorkshire and Derbyshire, and in the flowering season, nothing can be more delightful to the eye or sense of smell than the hedge blossoms. There are also many fields inclosed with stone, built about four and five feet in height and a foot in width. They are built without mortar—simply made of fragments of rock placed so as to form a neat and solid wall.]

Millet was first known in India and Abysinnia.

[Written for the Valley Farmer]

LOVE FOR OUR BUSINESS.

There is no use, unless a man has a love for his business — he will not succeed. He will make a living—he will even make money: but he will never make as much; and, most of all, he will not enjoy himself.

It was determined to make Robert Burns a farmer; and a farmer he was; but not half so good as many of the plodding farmers around us. Circumstances made him a farmer—Nature made him a poet. He struggled to obey Nature, and, in spite of the circumstances, showed what was in him. With favorable advantages of development, Robert Burns would have been one of the great, instead of mere genuine poets of the world. He would have sang untrammeled, and developed his full manhood—which was of the noblest kind, but degraded, as it was, by circumstances.

The world is full of such examples. We need not enumerate them. They are generally unnoticed, undeveloped. And it is circumstance that does it. People cannot follow their inclinations as in the olden time. We are not wise enough to let them do so—or to encourage the principle. How many farmers are plodding along with their thoughts upon the mechanic arts, or the professions, who have not the means nor the encouragement to break from the shackles that bind them. And these are our bad farmers: not all—for there are many clodhoppers.

And so, how many people do we see in the ministry, in the legal profession, that were better farmers, better mechanics The remark is often made about ministers and lawyers—"He should have been a farmer." This may have been a mistake, however. Unless vanity prompts a man, he will generally select what suits him best—for what he has the most relish. Circumstances, as we have said, may also interfere. But the great difficulty is, men in general have no particular relish; they are not fitted for any particular calling; a sort of general man in society, doing what he does in an ordinary way. This is the state of things that we find—we said in general. Perhaps we include too many in this class. The truth of the matter is, the progress of the world is done by comparatively few men: the men who have a genius for a thing (relish for their calling always accompanying capacity), and concentrate their energies upon it. Such make it tell; such advance the world—in mechanics, in philosophy, in literature—such are the men who invent and discover, who achieve. Drones do nothing; the rabble fills out what is required by the leaders, the men of progress. Thus we see how great is the influence of one man in a neighborhood or village. He controls the whole—not because he aims to do so. He may do it unintentionally. His superiority does this, and people naturally obey. Give this man genius and the means, and what aid he will find around him. Everybody, almost involuntarily, will assist him. Yet from this very rabble, men of genius will often rise and control events: some—less fortunate—will not. They have less force, less courage, or circumstances are too hard upon them. The throng has many such men—and there they die "unknown, unseen." How finely would the machinery of the world operate if every one could be left to follow his or her own inclination in respect to vocation. MARY.

Farm Implements and Machinery.

We make the following extract from a valuable article under the above head, by J. J. Thomas, in the Report of the Department of Agriculture:

The two great requisites for successful cultivation are a fertile soil, and the means for its working and pulverization. The first is attained by natural excellence combined with manuring, rotation, and plowing in green crops. The second is accomplished by farm implements and machinery. Without the latter, no soil, however excellent, can be cultivated. They are as indispensable as the breathing apparatus to the life of an animal, or as vessels to the navigation of the seas. In nothing is the advancement of modern agriculture more conspicuous than in the rapid improvement of the tools and machinery of the farm.

Compare, for example, the old wooden mould-board plow, extensively used not fifty years ago, with the best modern 'centre-draught,' or steel mould-board, easy running, smooth cutting, and inverting the sod almost with mathematical precision; or the old fashioned mode of pounding out grain with the flail, with the best improved threshers and separators. Observe the difference in expense between laboriously collecting the hay of a ten acre meadow by means of hand-rakes and sweeping it up with horse power, with revolving or steel tooth rakes; or the slow fatiguing labor of dropping the minute seeds of root crops when compared with the rapid and accurate distribution by the best seed drills. No laborer who has gone through the slow toil of swinging the hand-scythe and cradle day after day, will need any argument to prove to him the value of horse

labor as applied to the best mowing and reaping machines, which shear off ten or twenty acre crops in a day, and during the present scarcity of labor, occasioned by the war, extensive farmers must have utterly failed to go through with their operations but for the assistance rendered by modern implements for cultivating, drill planting, harvesting and threshing.

The amount of capital at present invested in farm implements throughout the United States is probably not less than five hundred million dollars! How important that this money be well invested! The best implements will execute work not only better and more perfectly, but at a vast saving in expense over those of bad construction. Take one of the simplest tools as an example; the common hand hoe, one made of best steel, and of light, neat construction, will enable a laborer to do ½ more work than a heavy, clumsy one, or save one day in four, twenty-five days in every hundred of work—an amount in a single season, more than fifty times as great as the difference in cost. The best steel plow may cost five dollars more than a poor cast iron one; but the force required to draw it if one-fourth less, would save the labor of a span of horses of one day in every four, and perhaps fifty or a hundred dollars yearly. What would be thought of the man who, to avoid the expense of a good plow, preferred to spade up his fields by hand, or to carry his grain to market on his back, to obviate the cost of a farm wagon? He would commit the same kind of error, although perhaps more glaringly, as the farmer who neglects to avail himself of the information on the machinery of the farm and the principles of its construction and use. Much loss has been occasioned by a want of knowledge of the principles which govern the working of all implements and machines, and many suffer themselves to be imposed on and deceived, when a simple and ready application of such principles would at once detect errors without resorting to expensive trial. The day is past for the commission of such blunders as the man who thought he was favoring the weaker horse in his team by giving it the small or short end of the whiffle tree, or of the other man who balanced the bushel of grain, when carried to the mill on his horse's back, by placing the the grain in one end of the bag and a large stone in the other. But still no one can visit any large agricultural fair without witnessing, among the large collection of farm implements, instances of glaring departure from fundamental mechanical principles.

Horse radish came from the south of Europe.

Something that Farmers Need.

Every farmer needs a nail box, well stocked. He should have at least nine sizes. The following table will show any one at a glance, the length of the various sizes, and the number of nails in a pound. They are rated "3-penny up to 20-penny."

3-penny 1 in. 557 nails; 4-penny 1¼ in. 353 nails; 5-penny 1¾ in 232 nails; 6-penny 2 in. 167 nails; 7-penny 2¼ in. 141 nails; 8-penny 2½ in. 101 nails; 10-penny 2¾ in. 68 nails; 12-penny 3 in. 54 nails; 20-penny 3¼ in. 34 nails.—Spikes 4 in. 16; Spikes 4½ in. 12; Spikes 5 in. 10; Spikes 6 in. 7; Spikes 7 in. 5.

From this table an estimate of quantity and suitable sizes for any job of work can be estimated.

A farmer's nail box should be divided into ten compartments, one for each sized nails and one for spikes It need not be large, because it is only intended for jobbing, and to have a suitable sized nail for all purposes, always at hand. It should have a good strong handle, like the bail of a basket. Two or three gimlets, an awl or two, and a nail set should have places in the nail box, and of course the hammer. Another tool box should contain two saws, a plane or two, several files, punches, cold chisel, et cetera.

RAISING BUILDINGS.

Many of our buildings are too near the ground; the sills are rotting, and the water is settling around and under them, making a slough in the spring and an unhealthy place.—The remedy is the easiest in the world. Raise your building with a screw. You can raise one corner at a time as high as you want it—twelve or fifteen inches. This saves your building. Then there will be a chance to fill up with ground, mixing gravel or sand with it, and manure if it extends into the garden or the field. Each neighborhood is generally supplied with screws. If not, purchase one at the foundry. There is nothing we are so apt to neglect as this very thing.

THE SHADY SIDE OF FARMING.—Under this title the correspondent of a New York paper furnishes an article. He shows that there is a shady as well as a sunny side to farming. This is the way with all the departments of life. Why? Because there are always shiftless men in them. Poor farming is done by poor farmers. The best sometimes find shady spots; but these are the exceptions to good farming. The good things are exceptions to bad farming. It is not then in the pursuit of farming where the difficulty is; it is in those that pursue it. Our wretched farmers make the great shady side of farming. Agriculture properly managed is a paying as well as an enjoyable pursuit. It is healthy.

AGRICULTURAL ITEMS.

Investing Manure.—To throw away manure when your soil is rich, is like throwing away your money when you are wealthy. The result will be poverty in soil and pocket. Manure is gold, and the soil will hold it for you if you give it to its keeping, to draw upon its interest any time you feel disposed. Indeed, that is the only spot to keep it; and when there you are all the while getting the benefit, whether you wish it or not. If nothing else will do it, the grass will give it you. It will benefit you, if you but put it in the soil—its place. Else it will take wings and benefit somebody else.

Salt given to sheep improves their wool, both in quality and quantity. It makes the sheep healthier and stronger, and fits it the better for the lambing season. In winter it is an excellent agent to counteract the chill produced by drinking cold water.

It is a good practice to plow a little deeper every time you plow, till you get up to the beam of the plow. The sub-soil generally has fertility which is not appropriated, and which when brought to the action of the sun and frost, will make good soil. Loam may be plowed deep at once; and so, soil that is sandy or gravelly.—But, all others—gradually. Bring up much clay at once, and you spoil your land for years

Rain water contains fertility. If dropped upon loam it is absorbed; on sand it leaches away; on clay it evaporates, except what comes in immediate contact with the clay. The rain water, gathered in the atmosphere of cities contains much more fertility than that of the country. Gardens in the vicinity of cities should be better than in the country.

Manure on Clay.—It is known that clay has an attraction for ammonia. Therefore, if you spread your manure on a clay soil, the ammonia will be taken in by it. A sandy soil will not do this. Hence the difference of opinion about surface manuring. And it is clay land that is best for grass, as grass is best for top-dressing. Here then there is perfect harmony. But clay will take in manure equally well, though on no account must it be buried deep. Clay is naturally cold, and if buried deep, will be still colder, and thus arrest decomposition. Have it exposed to the sun and air as much as possible.

Wheat per Acre.—Over 63 bushels of wheat to the acre were grown in England on soil having clover the year before—and no extra pains were taken. It came in the ordinary way of farming. But the year was excellent.

Cabbage.—The best method to preserve cabbage in winter, is to gather them early, say about the first of November, when they are perfectly free from moisture, and hang them up in a cool, dry cellar. The great secret lies in their being kept dry until needed for use. Another excellent way is, to chop them fine, and pack in a stone crock, in good cider vinegar, adding salt and pepper to suit the taste, and as good sugar as you can afford. Now, if you put into this preparation a little bruised horse radish root, it will keep sweet and good.

Measuring Land.—Every farmer should have a rod measure—a light pole—just sixteen and one half feet long, for measuring land. By a little practice he can learn to step a rod at five paces, which will answer very well for ordinary farm work. Ascertain the number of rods in width and length of a lot you wish to measure, and multiply one by the other, and divide by one hundred and sixty, and you have the number of acres, as one hundred and sixty square rods make a square acre. If you wish to lay off one acre, measure thirteen rods upon each side. This lacks only a rod of full measure.

Pea Straw for Ewes.—We all know the value of pea straw. When early cut and properly harvested, pea haulm is one of the valuable hays to feed out. An English authority has discovered that it is particularly good for ewes at the lambing season.

Difference in Manure.—We fear but a small portion of our readers take care of their manure as they should. They rely upon the strength of their soil. And yet they will not deny that well-rotted, rich manure adds materially to their crops if applied. There is much difference in manure. The richest manures are obtained from animals when fattening. Hence hog manure is very rich. It is known that the excrements of cattle when "crowded" for the butcher; when fed all they can eat of the richest food, is much richer than that of ordinarily fed stock. The reason is obvious—much food must pass that is not converted to fat in the system. Now, all such manures should be carefully husbanded.

Keeping Vegetables in the Cellar.—The editor of the *Albany Cultivator* keeps his roots by burying them in moss. He frees them of dirt and foliage, and puts them in barrels or boxes with layers of moss. This keeps them fresh and solid. Dryish ground or sand will do it equally well.

FERTILIZERS.

ED. VALLEY FARMER: The spirit of enterprize having been breathed into the farmers of Missouri and Illinois, by the high prices for produce induced by the war, we begin to look around for fertilizing material that we may be enabled to make *large farms* on *small* tracts of land, and thereby increase the profits, at least four-fold, over the hitherto prevalent practice of slovenly skinning the land. My attention and surprise has been excited by the fact that there is no fertilizing material manufactured in this city, notwithstanding the city is almost surrounded by *bones*, that might be ground and sold at immense profits to the manufacturer and farmer. And material for the manufacture of poudret being also abundant and *costless*, it seems that capital, now plenty, could not be used to more *paying* advantage than in its manufacture. Here is a large field for the profitable exercise of an *enlightened* patriotism. Yours truly, B. S.

CULTURE OF ONIONS.—The extraordinary rise in the price of onions, caused by the great demand in our camps and army hospitals for this most valuable of all common vegetable antiscorbutics, has doubtless sufficiently indicated to intelligent farmers that the onion crop will be one of the most profitable which they can cultivate this season. In order to assist them, we copy the following hint:

"The prevailing opinion is that to grow good onions, the sets grown the previous year should be planted. This is an error. Better onions and larger crops can be grown from seed than from sets. The seed should be first sown in a hot-bed as thick as they can stand. As soon as the seed is up, open the beds to the air, and water freely. In April prepare your ground and plant the sets from the hot bed, singly, one by one, three inches asunder, in rows ten inches apart. If the ground is very good, and they are well cultivated, you may have eight hundred bushels from an acre."

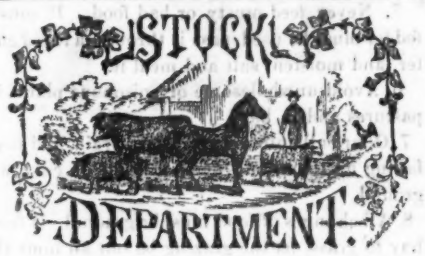
SORGHO.—The sorgho crop of 1863 has disappointed expectations, but not disappointed the people, who are still bound, strong as ever, to prosecute this branch of business. Such are the cheering accounts from some of the greatest establishments. At St. John's, Illinois, is one of these establishments, where the crop, from drouth and frost, has been an almost entire failure. But the frost and drouth are considered as accidents by these men—and that in a true light. The next year, perhaps, and certainly the general run of years, will not have this mishap. Really, we have seen nothing to discourage the growth of sorgho. As well not plant corn, because the frost cut it off the past season. The establishment mentioned above, and other extensive cultivators of sorghum, will, the coming season, greatly enlarge their area of cultivation. This does not look like discouragement.

VANDIVER'S CORN PLANTER.

Above is a cut of this Machine. It was patented and is manufactured by J. W. Vandiver, of Hannibal, Mo. At the high price of labor, every farmer should avail himself of labor-saving machinery, and we believe the Two-horse Corn Planters to be such in an eminent degree. Mr. Vandiver speaks as follows of this machine:

"This Planter is drawn by two horses—requires a driver and a boy to operate, each of whom rides on the machine. It lays off, drops, covers, and rolls two rows at a through, and leaves the corn in a condition more favorable for its growth and cultivation, than when planted in the ordinary way; or by any other planter now in use. It is simple and durable. It will plant from fifteen to twenty acres per day, according to the team and hands employed. Will deposit the corn deep or shallow as may be desired, and the coverers, (which are attached,) cover and leave a ridge on the corn. The rollers, (being concave on the peripery,) following immediately after the coverers, press the dirt and leave the ridge on the corn. The dropping arrangement is so constructed as to scatter the corn in the hill, so that it may be thinned without injuring the young plants, leaving them space sufficient to insure a luxuriant growth. This planter never fails to drop at the will of the operator, never cuts or breaks a grain, never clogs while planting, and will plant prairie sod or any land that is free from stumps, leaving the corn in the most favorable condition for its growth and cultivation. *Warranted to perform as recommended if used according to directions.* Farmers who wish to secure planters will do well to order them as soon as possible. Terms, Cash, at shop, $50.00. If intended to plant tough sod, extra cutters are required, for which an extra charge of five dollars is made. The sod cutters are not sent unless ordered."

KEEPING HORSE-RADISH.—While visiting a friend the other day, we tasted some horse-radish, as fresh as in summer. It was dug in the fall and put into the cellar, buried in ground. The ground keeps it fresh and solid.



MILCH COWS.

Ed. Valley Farmer: My attention has been very frequently attracted, of late, to the subject of Milch Cows, by hearing frequent conversations on the subject among farmers and stock raisers.

I have been surprised to find so much prejudice existing against Durhams, where, only a few years since, they were the rage, and almost fabulous prices were paid for that noble breed. But times change, and so do the opinions of men, and it is now generally acknowledged that it will not pay, even to feed a Durham cow; the *return* not being equivalent to the amount of food consumed, so near so large a market as St. Louis furnishes.

As a result of this discontent, there is a manifest disposition among many to discard this breed and test a new one. Some prefer the Ayrshires —some the Alderneys or Jerseys, and much the larger number seem interested to know more of the Devons.

As the qualities of these different breeds or races (for some if not all are distinct *races*), are estimated variously by different individuals, I have been led to investigate the subject as viewed by different authorities, and I shall here submit the result of my compilation. And first as to Ayrshires:

All authorities within my reach agree that this is decidedly a milking breed. It has been bred for years with this single object in view, and when it is considered that this quality can be developed and improved by judicious breeding as readily as any other distinguishing characteristic, such as color, form or temper, it is not at all astonishing that such results have been attained, and such large returns of milk, butter and cheese been procured as a reward to the intelligent breeder's management. As oxen they do not excel, nor do they fatten very readily.

The Alderneys are recommended for the richness of their milk, the quantity being too small for dairy purposes. They are very properly designated the "rich man's cow"—possessing qaulities which meet the wants of men of wealth better than the necessities of those in more moderate circumstances. They too have been bred for years, and no other traits of excellence than those named above have been developed. They are not considered good for beef, and the males are apt to be cross.

The Devons come next in order, and it is not at all surprising that they should be estimated as *poor milkers*, when it is remembered that they have generally been bred for market and work purpurposes. They are classed, however, about as the Alderney, making amends in quantity for what is lacking in quality; and whilst, as a general thing, they cannot compare with the Ayrshires as to quantity, they yet excel the Alderneys in this particular, and, far surpassing the Ayrshires, they fall but little short of the Alderneys in quality of milk. To this add their beautiful forms, uniform color, kind disposition, ready fattening propensities, together with their activity, docility and ability as workers (and these traits are acknowledged by all), and we have an animal better adapted to meet the varied wants of a mixed population than either of the others.—A number of efforts have been made by different breeders, to develop the milking qualities and capacities of this breed, and with great success. Messrs. S, & L. Hurlburt, of Conn.; Mr. Patterson, of Md; Mr. Wainwright, of N.Y., and other eminent breeders, both of this country and England, have proved, by experiment, the fact, that the Devons may be made to yield large quantities both of milk and butter. Indeed the experiments of these gentlemen procured from this breed, from fifteen to twenty-one pounds of butter per week, and as high as twenty-two quarts of milk per day, and that I should think if only approximated by the farmer, would be a gratifying success.

It would appear, therefore, that for dairy purposes, the Ayrshire stands pre-eminent, but as it is suited only to the uses of those who desire to *sell* butter, milk or cheese, it is not desirable or profitable for general breeding. The Alderney is more unsuitable still, being without recommendation for the dairy and as little adapted for market or work as the Ayrshire. The Devons, holding a position between these two for the dairy, are all that could be desired for the market or for work cattle, and as such are desirable and profitable to the breeder.

It it to be hoped, therefore, that they will receive the attention they appear to deserve, from those more immediately interested, and that a few years will enable us to chronicle the experience of our neighbors and friends, and thus we

may be enabled to dispense with all foreign and far fetched evidence on so interesting a subject.

St. Louis Co., Mo. April 1st, 1864. FARMER.

DOCTORING SICK ANIMALS.

One of the best systems of medical practice ever known, and which will probably stand at the head of the list for all coming time, is Nursing. Good care will do more than all the medicine in the world without it. Medicine is sometimes very good, but the most skillful physicians have found they could do but little with serious cases without that intelligent and careful watching at all times required for the removal or prevention of irritating causes and known as good nursing.

The writer once owned a horse suffering from an excessive cough. Numerous remedies were prescribed by kind neighbors, enough, doubtless, to have killed him at once. I concluded to discard all, to give the best attention to his wants and avoid everything which causes or prolongs a cold. This was during the changeable weather of autumn and he was blanketed whenever a chilly air was apprehended; he was worked very moderately, always avoiding perspiration, and he was fed on succulent food which was supposed to favor expectoration, and especially young clover. In a few weeks nature had performed a perfect cure; and if any one of the nostrums had accidently been employed, and had not proved very prejudicial, it would unquestionably have received high praise for its efficacy. It is of the utmost importance to discriminate between a recovery *by virtue* of a medicine, and *in spite of it*.

To *keep animals in health*, is more important than to cure sick ones, and for this purpose a few leading rules should be always observed, and which cannot be out of place here.

1. Always feed regularly, as to time and quantity. Many animals are made sick by starving at one time, and stuffing at another. Especially, never *overfeed*.

2. The same rule must be observed with watering—and let the water be *pure*.

3. Never *overwork* animals—regular and moderate exercise will enable a working animal to do more the year through, by all odds, than any hurried driving at one time and resting and overfeeding at another and be infinitely less liable to disease.

4. Allow a regular supply of salt—it is useful, but an observance of the preceding rules without salt, will be incomparably better than their infraction with it.

5. Never feed musty or bad food. If musty fodder must be used, pass it through a rapid cutter, and moisten, salt and meal it.

6. Avoid unwholesome or poisonous plants in pastures and in hay.

7. Guard all animals against cold rain, and snow falling on them, and against lying on cold wet ground.

8. All changes of food must be gradual. If from hay to grass, let the grazing be but an hour the first day, two hours the next, three the next, &c. The same caution must be carefully observed, in beginning to feed with roots, grain, &c.

9. Be careful that animals always have enough of exercise—and plenty of pure, fresh air. Stables must be well ventilated—animals often become sick from breathing foul air.

10. Lastly, and by no means least, let strict cleanliness be observed. All animals, even pigs, kept clean and curried, are found to maintain their flesh better, or fatten faster, than when dirty or neglected—and cleanliness is more important to health than for flesh.

We do not propose to go into a long discourse on diseases and their remedies, but there are a few of the more common diseases and some simple remedies for them, a knowledge of which may be useful for the inexperienced.—[*Ex.*

WORMS IN HORSES.

Animal parasites are sometimes found in the intestinal canal of a horse in very large numbers, they often exist without producing any perceptible disturbance in the economy; yet in some cases they unquestionably produce irritation, suffering, and ill health. The usual disease with which worms are connected is indigestion, known by fetid breath, tucked up belly, staring coat, loss of flesh, voracious appetite, and slimy stools.—Worms—excepting bots—are supposed by some to be of spontaneous origin; but our opinion is, that they are the result of a perverted state of the parts in which they appear. The long, round worm is an inhabitant of the small intestines; and the pin, or thread worm, is generally found in the large intestines and rectum.

Treatment.—Various are the remedies used for the expulsion of worms: The chief are, wood ashes, poplar bark, sulphur, salt, castor oil, turpentine, calomel, tartar emetic, and aloes; either of which will sometimes bring away a quantity of worms. But the difficulty does not end here; the worms will generate so long as that morbid habit which gives rise to them exists.—Hence the course invariably pursued by the author is to change the morbid habit by alteratives

and vermifuges combined. The following is a good example of the same:

White mustard seed, (whole); powdered mandrake; sulphur; powdered wormseed (*chenopodium anthelminticum*); salt, ginger, and charcoal; of each two ounces. Poplar bark, one pound. Mix. Dose, one ounce, night and morning, in the food. Under the exhibition of this medicine, aided by proper dietary regulations, the animal will gradually improve in condition, and in the course of a short time the worms will disappear. Should the rectum abound in pin worms, an injection of salt will be indicated.

The following vermifuge is occasionally prescribed by the author, and it has, in some cases, brought away large quantities of worms:

Castor oil, 12 ounces; oil of wormseed, 1 ounce; oil of tansy, 3 drachms.

To be given on an empty stomach, followed by mashes of fine feed or shorts, well seasoned with salt. To be repeated if necessary, until the bowels respond.—[*Dr. Dadd.*

Mad Itch—Its Preventive.

This disease frequently occurs in the West. Mr. John Walker, in the *Prairie Farmer*, has a very sensible article on its prevention. He says:

"Mad itch arises from feeding cattle and hogs together. The latter chew the fodder and the cattle take it up after them, and can't digest it.

In the July number of the *Valley Farmer* for 1858, a letter was published, explaining the cause of the disease. Like many such, little attention was paid to the remarks of the writer—at least by me—but to it I am indebted for the removal of the cause of the disease among my cattle. I will give you an extract from the letter referred to:

'The first symptoms are a scratching and rubbing of their heads, ears and neck. They will rub them till they become perfectly raw. In the meantime they suffer a great deal, which they show by their running and bellowing in a piteous manner, after which death ensues. Before they die, their heads, neck, body and tongues swell, their eyes become bloodshot and they suffer a great deal. Death is certain to ensue if the disease is taken, for I tried various remedies, such as a pint of castor oil with one, a pint of lard with another, and a tablespoonful of calomel with another, and all to no effect, as I lost nine head in one week.

'The hogs chew the stalks and get all the moisture out, when the cattle come along and eat them, and it lodges in the manifold and becomes hard and dry, so that when you take it out and break it, you can press no moisture out of it. The manifold has two entrances, about three or four inches apart, and both on one side, so that medicine can pass through without interfering with this hard, dry substance that is killing them.' "

A THOROUGH-BRED HORSE.

Gen. Daumas of France, has published a work upon Arab horses, with commentaries by Emir Abd-El-Kader, which contains an abundance of useful information. We copy the following. The Arabs thus define the characteristics of a thoroughbred horse:

"The thoroughbred horse is well proportioned, his ears are small and in constant motion, his bones massive, his cheeks meager, his nostrils wide as the throat of a lion, his eyes bright, black, and level with the head, his neck long, his chest full, his withers prominent, his loins well knit, haunches strong, his fore-ribs long and the hinder ones short, the belly hollow, the croup rounded, the upper part of his legs long like an ostrich's and furnished with muscles like a camel's, his hoofs black and of a uniform color, his hair fine and abundant, his flesh firm, his tail very thick at the dock but loose at the extremity. Looked at in front, he is like unto the peak of a lofty mountain. Looked at from behind, he seems to lean forward as if he would prostrate himself. Looked at from the side, he shows himself robust, and well set up. To sum up: he should have four points broad, the front, the chest, the croup and the legs; four points long, the neck, the upper part of the legs, the belly, and the haunches; four points short, the loins, the pasterns, the ears, and the tail. All these qualities in a good horse, say the Arabs, prove firstly that he has real blood in him, and secondly that he is certainly fleet of foot, for his form combines something of the grey-hound, the pigeon, and the mahari, or riding camel."

Abd-El-Kader says;

"A thoroughbred horse is one that has three things long, three things short, three things broad, and three things clean. The three things long are the ears, the neck, and the fore-legs. The three things short are the dock, the hind legs and the back. The three things broad are the forehead, the chest and the croup. The three things clean are the skin, the eyes, and the hoof. He ought to have the withers high, and the flanks hollow, and without any superfluous flesh. 'Dost thou accomplish a journey at great speed with steeds high in the withers and fine

in the flanks?' The tail should be well furnished at the root, so that it may cover the space between the thighs. 'The tail is like unto the vail of a bride.' The eye of a horse should be turned as if trying to look at its nose. 'Like to a beautiful coquette who leers through her vail, his glance toward the corner of the eye pierces through the hair of the forelock which covers his forehead as with a vail.' The ears resemble those of an antelope startled in the midst of her herd. The forelock, abundant. 'In the hour of pain, mount a slender mare whose forehead is covered by silky and flowing hair.' The nostrils, wide. 'Each of his nostrils resemble the den of a lion; the wind rushes out of it when he is panting.' The cavities in the interior of the nostrils ought to be entirely black. If they are partly black and partly white, the horse is of only moderate value. The fetlock, thick. 'They have fetlocks that resemble the down which is concealed beneath an eagle's wing, and like him they grow black in the heat of battle.' The fetlock joint, small. 'The fetlock joints of their hind legs are small, but the muscles on both sides stand out prominent.' The hoof, round and hard. 'The hoof should resemble the cup of a slave. They walk on hoofs hard as the moss-covered stones of a stagnant pool.' The frogs, hard and dry. 'The frogs concealed beneath the hoofs are seen when he lifts his feet, and resemble date-stones in hardness.'

How to Make Docile Horses. — The docility and amazing instinct of the Arab horse are shown to proceed mainly from his constant association with the family of his owner, sharing their food, sleeping in their tent, and lastly from the early age at which he is broken in, which they say checks the development of the spleen, a very important point in the opinion of the Arabs:

"At the age of eighteen or twenty months the colt is mounted by a child, who takes him to water, goes in search of grass, or leads him to the pasture. Not to hurt the bars, he guides him with a longe, or a tolerably soft mule's bit. This exercise is good for them both. The child grows up a horseman, and the colt acquires the habit of carrying a weight proportioned to his strength. He learns to walk, to fear nothing, and it is in this manner, say the Arabs, that 'we contrive never to have restive horses.' For the first few days the bit is covered with undressed wool, partly with a view not to hurt his bars, and partly allure him to docility by the saltish flavor, of which he is so fond. When he begins to champ the bit, the task is nearly accomplished. This preparatory exercise takes place morning and evening. Thus sagaciously handled, the young animal will be ready to be mounted in the early part of the Autumn, when he will be less tormented by the flies and heat. Wealthy owners, before they allow their colt to be mounted by a grown-up man, sometimes have him led up and down gently for a fortnight, with a pack-saddle on his back, supporting two baskets filled with sand."

When he is about thirty months old, the colt is taught not to break loose from his rider when the latter sets foot to earth, and not even to stir from the spot where the bridle has been passed over his head and allowed to drag on the ground.

Especial care is taken in teaching this lesson, because it is one of great importance in Arab life.

DISEASE AMONG SHEEP.

Ed. Valley Farmer: Through your journal I wish to communicate upon a subject, stating facts, not information; the latter desired through you or some correspondent of experience. I began to lay a foundation for mutton and wool producing more than a year since by purchasing such sheep of good improved stock as I could get; chiefly Kentucky stock. I have also pure blooded Southdown.

About two weeks after the close of the severe weather of Jan. 1, a portion of my flock began to exhibit evidence of want of full vigor—though not sick. They became weak, would stagger, and if urged to go would lie down, and after some time with difficulty rise, it away from the fold; but, if in the fold, remain down for twenty-four hours, or longer. Some, if not disturbed, would stand immovable for hours, as if in a "brown study," nose near the ground.—A profuse, yellow, discharge came from the nose, almost closing the nostrils; the eyes weak, partly closed sometimes, with a yellow gum about the lower lids; they refused to eat, and drank very little water—which latter surprised me greatly, as I expected a lung fever. After the second day, the sheep would rise no more, nor eat, nor drink; heave heavily at the flank; pulse over 100 per minute. About the fourth day die. All cast their lambs; some in the early stages of disease, and some just before death; some lambs perfect, and some altogether premature. All that sickened died; the remainder now seem thriving—though one died last night. Fat and poor die alike.

I wish further knowledge of the disease—its cause—but especially a preventive, which will be thankfully received. F. B. Walton.

Bellemonte, St. Louis Co. Mo.

SALTING CATTLE.

Much carelessness is practiced in this respect. There is little system in salting cattle; and this is a great wrong. A creature may be killed by salt. When given in large doses, say a pound or two, it becomes a poison. When given in a large, but less quantity, it purges, gets up inflammation of the mucous membrane of the bowels, and other evils. A proper use is what is wanted.

Salt always at hand, where cattle can lick it at leisure, is a practice with many dairymen, and one of advantage, they say. They hold that the creature knows best how much it needs. We shall not gainsay this. But a rule applied by the farmer to all his stock is what is practiced by the most renowned farmers, and with profit. System is what is wanted in this as in other things. The best effects have been obtained by giving to horses about half a pound a week; cattle double and triple that portion, according to the size, age and feed; as abundant fresh feed requires more salt. Sheep are more addicted to salt, and require it more than any other animal. Though a small animal, it requires half the amount of the horse. The hog nearly the same.

Salt is a stimulant. This should always be borne in mind. When given too largely it acts deleteriously. When properly given, as we have pointed out, it aids digestion, adds strength and vigor to the system, and, in addition, seems to extend its preservative effect to the living as well as the dead animal, as it shields it from disease. This has been proved by experiment, as well as by observation generally. A German savan (Uberacker), experimented with sheep, depriving ten of his sheep of salt. The experiment was tried for three years. "In the first year, five of the ten died of rot and worms; in this year, the remainder of the flock, 450 head, lost only four sheep. The second year, a new lot of ten sheep, deprived of salt, lost seven individuals; the remainder of the flock, 364 head, lost five only; a little later, the other three died also, from diarrhea. The third year was very rainy. Sixteen sheep were selected, and deprived of salt. The whole of them died in the course of the year, of rot and vermicular pneumonia."

Care should be taken, where cattle are salted, that less be given in cases where fodder contains salt, particularly hay, which is often salted to preserve it. Allowance should always be made; but we fear it is but seldom done. In fact, salt is too little given in the winter, when it is most needed, and it has a warming effect upon the system. It also corrects the bowels, which are apt to be rigid in winter.

[Written for the Valley Farmer.]

MILKING.

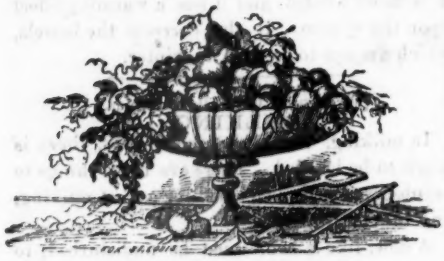
In milking, as in all other things, there is much to be learned. There are three things to be observed: *Regular* milking; *Fast* milking, and *Clean* milking.

A cow, like a hen, must be undisturbed, to produce well. If worried with dogs, or driven fast by rude boys, or frightened in any way, there will not be as much milk given as when the cow is quiet and well treated. Regular milking comes under the head of good treatment. It further gets up a habit, which has much to do with giving milk. For instance, a cow milked early; say when two years old, or less; will be a more copious milker than when begun late; say three years. When not milked till four years old, there will be little milk. Perhaps the reader can bring to mind such cases. We have never known a successful case: and we have known a number. To milk regularly, and at equal hours apart, is to get up a habit, and an equalized strain upon the udder. To milk at sunrise and sunset, will not do in summer, as the days are so much longer than the nights that the bag will be strained full out of proportion. This is hurtful to the udder. Milk, so as to draw an equal quantity of milk at every milking; and do it regularly.

Next, fast milking, experience tells us, is best. It yields more milk; doubtless, on the principle that when milk is let down it should at once be drawn away; and if neglected, it will be absorbed, or partially become caked. This latter is the case, so say those who have examined it. All good dairymen urge fast milking. And they also urge clean milking; for what is left in the bag is partly absorbed or curded, affecting the membrane with which it comes in contact. When these three rules are carefully observed, all the milk that can possibly be got away will be had.

Mild, quiet treatment for milch cows. This is the experience. Dogs should never be permitted to bring the cows, unless they do it moderately, and the cows are unexcited by it.—Fetching the cows from a distance, is positively bad, as the churning exercise will hurt the milk and the bag. In such case walk them very slowly. Go half an hour sooner after your cows. MILD treatment is the thing for milk cows; but quick, clean, regular milking.

DAIRYMAN.



HORTICULTURAL.

[Written for the Valley Farmer.]

A Description of Some of Our Grape Vines.

BY LOUIS L. KOCH, GOLCONDA, ILL.

ISABELLA.

A grape more adapted to the Northern and Eastern States, where it has been, and is still, considered excellent. But in the West, and especially the South-west, I regard it as worthless. Frequently subject to more diseases than the Catawba; the berries upon such bunches as may have been spared, ripen very unequally; and until the time of harvest your may observe berries upon one and the same bunch of every conceiveable shade between a green and a dark blue, which alone condemns this grape as a wine grape. I have had but one opportunity, within the ten years I have cultivated the Isabella, to press some few gallons therefrom. It was rather of a light color, much milder flavor than the Catawba, and seems particularly suited for Champagne purposes. In parts of the country where the fruit of this grape attains a more equal and perfect maturity, it would answer for any purpose.—Bunch, rather large, when fully developed; compact; long; very frequently shouldered.—Berry, oval, large, dark blue, but little bloom, juicy when perfectly ripe, pleasant wine flavor, skin contains some dye stuff, and when properly treated will do for Claret. Growth, very exuberant, even surpassing Catawba; the vine, when growing, wooly; when ripe, of a dark color, fruit buds compact. Propagation by cuttings pretty certain. Very productive. Time of maturity, difficult to approximately determine it—the berries on one and the same bunch ripening unequally, although always one week earlier than the Catawba.

CONCORD.

As a remote descendant of the Fox Grape, it is unmistakable in its "habitus," especially in form, color, and size of foliage; the great quantity of hair found upon its green branches (frequently resembling thorns—a rare phenomenon with the finer grapes) as well as by its luxuriant growth, even when surrounded by unpropitious circumstances.

In the transactions of the Middlesex Agricultural society for 1855 the following mention is made of this popular grape.

"This grape was raised from seed by Mr. Bull, Concord, Mass., about twelve years since, from another seedling already obtained, with intent to test the Van Mons theory of successive reproduction and consequent amelioration."

The Concord Grape received its high interest since 1854 by the communications of Mr. Bull. At that time I obtained a vine from there, and devoted to it every possible attention, and add here the results of my observations of it during nine years, with a superficial description of it, only for such however as have not yet this well known grape in their collection, or have not had an opportunity elsewhere to see it. Bunch, rather long, mostly shouldered, compact, weighing sometimes 2 pounds when receiving special attention. Berry, large, round, dark blue, trifling light blue bloom, rather pulpy, although juicy, of a sweet pleasant flavor. Growth, very exuberant. The vine of a chesnut color, which thoroughly withstands the cold of winter, attains untrimmed great length and strength. Foliage, uncommonly large, rather round than pointed, but rarely serrated, of a dark green, lighter on the under side, suffering but seldom from mildew.—Propagation by cuttings, easy and extremely certain, extraordinarly productive when adequately trimmed. Time of maturity, from ten to twelve days earlier than the Catawba, the Concord being one of our earliest grapes.

According to all that has been said, the Concord, whenever it is free from disease, is exceedingly valuable as a dessert grape by virtue of its productiveness, hardiness of the vine, handsome appearance and fine flavor of the fruit. We know of no grape to compete with it, and its culture, in the proper localities, and for the object stated, cannot be too strongly recommended. To realize wine from this grape, I am not so ready to accord it that merit which others have been and are still wont to accede to it. As to quantity, an item too particularly noticed in our present grape culture, the result would prove highly satisfactory, but by no means as to quality. In order to form a judgment on the subject I several times tried this grape for the purpose of wine. The grapes had been cut without loss, when perfectly ripe, and everything requisite to produce a good wine (the same which in case of other grapes has always given the greatest satisfaction) was applied

with the utmost care, the must having been taken away from the press; yet the wine was but of a very inferior quality, hardly deserving any notice, so that its dissemination would add but little reputation to our American Wine Culture. Being subject, besides, in my locality and vicinity to the same diseases and in the same proportion as the Catawba, and consequently of no use here for table use. I have reduced the Concord in my vinery to a few, keeping some on hand, so as to have the sort in my collection, as well as to have a small number of plants to meet the many demands made for it. Propagation easy, and by cuttings certain. If my views of this grape conflict with those of its many admirers, I beg leave kindly to refer to what I have said in the outset, namely that I would but communicate the results of my own experience.

DIANA.

Also of the family of the Fox Grape. A seedling raised by a lady of that name. Named after her. Made its appearance about the same time with the Concord. Has not yet received the high rank this fine grape merits.

Bunch, medium size, broad at the top, rather long than broad, seldom shouldered, very compact. Berry round, amber color, almost brown when fully ripe; thick skin, pulpy, although juicy, very sweet and aromatic flavor, without any acid, entirely free from the peculiar taste of the Fox grape. Growth, very strong. The branches of a pale brown are not as hardy as those of the Catawba; wood ripens later. Foliage of nearly the same form as the above-named, but on the under side more of a white, inclining to a yellow; the same in regard to the tender ends of the summer branches. Propagation by cuttings not as easy as the preceding, and certain only by layers. Time of maturity, somewhat earlier than the Catawba, although nearly equal. It seems, as if no sufficient opportunity has been afforded this valuable grape, so as to have its excellent qualities generally known, and that is the reason perhaps why we do not find at present more of them in our vineyards. Although not entirely free from the berry rot, which affect the Catawba and Concord, yet it appeared in my vineries in a much smaller proportion and never in such a way as to incur any danger. Without making mention of its excellent flavor, when of adequate size, for table use, its advantages as a wine grape are unmistakable. As calculated for white wine, I think it hardly superseded by any grape in our collections, and from its flavor it fully justifies the highest expectations.

Repeated obstacles, although not appertaining to the vine as such, caused me to become discouraged, and forbade experiments of a larger scale, in the way of preparing wine from this grape, so that I could not not obtain and communicate any results in this respect.

The small experiments I could make go thus far to justify my anticipations. The wine proved free from all that roughness or pungency of which the Catawba cannot be deprived even with the utmost care. It had a very agreeable and mild flavor, and its almost entire absence of color, when thoroughly clear, gave it particular interest. The many descriptions of this grape in different treatises and catalogues, all of which are so unanimously favorable to it, inspire me with the hope, that this exquisite fruit will soon receive its due recognition and occupy its well merited rank among our grapes.

HERBEMONT.

Very probably of southern latitudes, of the foreign wine countries. Being so thoroughly adapted for wine, it has in our vineries secured for itself recognition and reputation.

Foliage, grape, vine—its entire habitus (pre-eminently the tenderness of the vine with its buds so closely set, and requiring shelter here in the winter season): all testify of its remote southern home. Bunch when fully developed six inches long, rather long and running to a point than broad, mostly though but slightly shouldered, very compact. Berry, medium size; when fully ripe, dark blue; so much covered with a greyish blue bloom as to make it appear as its true color; very thin skin, juicy, sweet, without any acid or flavor of the Fox Grape. Growth, very strong, exceeding all sorts previously named.—When properly attended and when sufficiently strong, the summer branches reach a height of 20 feet; a sufficient reason why wood so exuberant and porus cannot effectually resist the cold of winter. Likewise, the branches, as well as the bunches upon them, require for their perfection, a long, warm, summer, when they are of a greyish brown, tinged with a little blue, spotted with dark brown specks. Leaves five-lobed, deeply serrated and strongly indented, essentially distinct from the grapes of the Fox family.—Upper side brilliant, bright green, under side of paler shade, almost smooth. Growth—propagation only certain by layers; the least from cuttings. As a bearer this grape excels anything I have ever met. Each fruit bud, closely set as I have already stated, produces generally three bunches perfectly ripe, and not unfrequently five or six. In the year '62 my Herbemont espaliers were so covered with grapes, that they appeared

a solid mass. This grape requires a long, warm summer, in order to ripen fully, which ripeness will be observed considerably later at the end of the large bunch than at the upper part, thus rendering a delay in harvest possible and demanding even then a careful selection, so as to furnish a good wine. If we attend to all the points stated, the Herbemont will produce a very good wine of a pale red, which can be darkened by retaining for some time the ground grapes in connection with their skins previous to their being pressed, thus rendering the wine more valuable. I pursued this process with my limited crop but for three or four days.

The general opinion touching the healthfulness of this grape I am sorry not to be able to endorse. A certain disease, somewhat similar to the so-called summer rot, becomes manifest when the berries may have attained a third of their size. It is perceptible in the form of yellow spots upon them, upon entire branches; at times on the whole vine; the berry darkens, shrivels, and, abides in such a state until fall trimming, the sad evidence of destroyed hopes.

This disease—the necessity of laying down the vines in winter as a protective against its frosty influence (an operation by no means easily performed)—and, finally, the fact, that the wine is far excelled by Norton's Virginia—all would deter me from setting out a large number of them in my vineries.

(To be continued.)

PEARS—BEST 14 VARIETIES.

At the late meeting of the Fruit Growers' Society of Western New York. The subject of Pears was quite fully discussed, and the following named fourteen varieties received the highest number of votes.

They are given as nearly as possible in the order of ripening, and the number of votes each received, is appended: Doyenne d'Ete 17; Beurre Giffard 14; Duchesse d'Angouleme 18; Rostiezer 12; Bartlett 21; Belle Lucrative 16; Flemish Beauty 12; Louise Bonne de Jersey 17; Seckel 16; Beurre Bosc 11; Sheldon 17; Beurre Anjou 14; Lawrence 17; Winter Nelis 12.

It may interest our readers if we give the list of the other varieties receiving votes, and the number of votes they respectively received: Tyson 10; Easter Beurre 9; Beurre Diel 8; Osband's Summer 7; Beurre Superfine 4; Des Nonnes 4; Glout Morceau 3; Vicar of Winkfield 3; Dearborn's Seedling 3; Ananas d'Ete 3; Virgalieu 3; Howell 2; Brandywine, Ott, Dix, Swan's Orange, Bonne d'Egée, Joseph de Melines, Paradise d'Automne, Doyenne Boussock, Duc de Bordeaux, Buffum, and B. Languere, each 1.

GRAFTING GRAPE VINES.

As much interest is felt on this subject, we give our readers all the reliable information we can obtain in regard to the operation. The following plan is from S. Meller, Lebanon, Penn., an experienced and successful grape grower:

"In the first place, see that you get good ripe wood, not less than one-quarter inch in diameter—less may do, but it is not certain. Keep this damp in sand or moss in a cellar until the ground opens in spring. I have performed on the 22d February with success. Remove the earth about three inches deep, select a smooth place; saw off the vine six inches below the surface, unless that comes on the roots, in which case it may be performed near the surface; pare smooth with a clasp knife; split down the stock in the middle; prepare the graft by cutting one inch above the bud and three below; wedge it the same as in other grafting; insert as usual, but be careful to have the line between wood and bark of stock and scion to be in an exact line with each other; the outside must not be a guide, as the bark of the stock will be much thicker than that of the graft. Fit the graft in firmly, and if the stock is still weak tie around it with twine or loose matting, so as to hold the graft firmly until it has caught hold by growing, by which time the bandage will decay and not hinder the growth of the vine. Never use wire, as I have seen some recommend.

Now take the earth and press it closely and firmly around the joint of grafting, but be careful not to move the graft; fill up to the bud; leave the point sticking out; over this put loose manure or weeds, or anything that will prevent frost from lifting the graft out, or your labor is lost. This will keep out frost, and prevent your bud from drying out.

About the time that vines begin to grow, it will be well to examine occasionally to see if the bud starts. The covering must be kept loose, and as the graft progresses taken away entirely. Suckers arising out of the root must be carefully removed, and oftentimes a degree of patience is necessary, as I have known the grafts not to start until July, when they began and grew well, ripening most of their wood. When they start thus late, it is well to pinch the end of the shoots about the 1st of September.—My usual success in this kind of grafting is about 90 per cent."

[Written for the Valley Farmer.]

NEW GRAPES.

In the January number of the *Valley Farmer*, a gentleman furnishes "A Description of Some of Our New Grape Vines."

The subject of New Grapes, is fruitful of the most gratifying promises of success, and should encourage the continued efforts of every lover of horticultural improvement. Grape growing is now attracting deserved attention throughout the country. From the beginning of the present century, up to within about twenty-five years, a vast amount of both time and money have been lost to the country in vain attempts to cultivate the varieties of foreign vines in this country; and it was not until some years after the discovery of the Isabella and Catawba, and their successful cultivation, that our amateurs were willing to abandon their fruitless experiments in growing foreign vines, with the belief that with well-directed efforts in the production of new seedlings, we had in our native grapes all that we need desire for the full perfection of this fruit in our own country.

Within the last ten years, thousands of new seedlings have been produced, some of rare excellence, even superior in richness of flavor to many of the foreign varieties grown under the most favorable circumstances in their own country. Not only have we made great progress in the production of new and choice native seedlings, but we have learned that while foreign varieties cannot be successfully grown with us in the open air, new and hardy varieties may be produced by hybridizing our native with foreign sorts, as we have the most conclusive evidence in that most excellent variety known as Allen's Hybrid, and with the promise of still further improvement in Rogers' Hybrids, though it will require some years yet to fully establish the true merits of the latter. In regard to Allen's Hybrid, it has been long enough under cultivation in various sections of the country to prove that it is not only a grape of most excellent quality, but among our most hardy kinds.

Among the thousands of new native seedlings, two were introduced to the public during the last season, that, after six years of careful trial in various parts of the country, have proved superior both in quality of fruit and hardiness of vine to anything yet grown in this country. These were produced by Dr. C. W. Grant, on the Hudson, near Peekskill, New York. Dr. Grant is well known, not only in this country, but abroad, as one of the most intelligent and successful cultivators in the United States. He is now devoting his entire attention, at an immense annual outlay, to the propagation of the vine, and in the production of new kinds.

The two new seedlings, as has been stated, have been on trial for six years, in order to test their true character, as to excellence of quality and hardiness of leaf, through varying seasons, and in different localities, before offering them to the public; and with this view he has furnished plants to his personal friends in various parts of the country. The writer, among others, was furnished with one of these, and has had it under cultivation for the last five years, and has had an opportunity of learning the habit and character of the vine and of the fruit. To this has been given the name of IONA, after the island on which it was produced. It is a fruit of great excellence, and is considered superior to any new seedling yet introduced.—It is classed by the best judges as second only to the Delaware, and in point of beauty it has no rival. It is of a beautiful wine color, and so nearly transparent, even when green, that the seeds may be easily seen. The bunch is large, with large berries; and unlike any other native seedling, it possesses the characteristic of some of the foreign kinds of being shouldered. The seeds are very few and extremely small. The flesh is sweet and uniformly tender to the centre, and resembles in flavor very nearly the Red Frontignan. By many it would be preferred to the Delaware, both for its beauty and large size. While the Delaware is the concentration of goodness, the great excellence of the Iona is only the more diffused. It has proved an early and great bearer; has always ripened its crops, and thus far has proved both healthy and hardy. The fruit may be kept through the winter, and so abounds in sugar that, with the proper care, it may be dried into raisins. To the Iona was awarded the first prize for the best seedling grape at the New York Exhibition last fall. It ripens two weeks before the Isabella, and will hang long on the vines uninjured by frost. For wine it has never been tried, but from its spirited richness, it is the opinion of experienced vine growers that it will prove one of the best wine grapes yet tested.

I will not encumber the pages of the *Valley Farmer* by quoting the opinion of this grape, as given by Peter B. Meade, Esq., Editor of the *Horticulturist*, who for the last three or five years has visited the island during the fruiting season, where this fruit originated, and where it has been so long on trial. Mr. Meade is both a

good and experienced cultivator of the grape, as well as an excellent judge of what constitutes a grape of the first quality. He regards it by far the best American seedling grape yet produced.

The other seedling referred to has been named ISRAELLA. It is a large black grape, ripening three weeks before the Isabella. It clings firmly to the bunch; it is rich, sweet and tender entirely to the centre. It is the earliest black grape of large size and good quality that is hardy.

Mr. Meade, after speaking of the excellent qualities of the Iona, says: "I am glad to learn, too, that the *Israella* is to be brought out. I ought to feel some interest in it, for it is the grape that I selected among your very earliest kinds, and named after Mrs. Grant; and I am sure I would not name any but a very good grape after her."

Mr. Meade then goes on to speak of the good qualities of the fruit and of the hardiness of the vine, which I need not here repeat. Notwithstanding a large number of plants of both these grapes have been propagated by Dr. Grant, it is due to the public to say that the stock for the present season is entirely exhausted. H.P.B.

STOCKS AFFECT VARIETIES.

ED. VALLEY FARMER: Will you allow an old man to state a few facts. In the first place, immutable laws govern in the vegetable as in the animal and mineral kingdoms, and may not be violated with impunity. Every seed will produce its own kind—good, bad or indifferent. And every stalk will produce its seed, in like good or bad. Can we mix the good with the bad or indifferent, producing a hybrid distinct from both, but yet possessing the qualities in part of both, and by thus mixing and crossing produce an indefinite number of varieties in the several species?

This is my experience—Corn, sorghum, broom corn, and those species that mix by the influence of pollen—or potatoes, pumpkins, melons, which mix by other means—admonish us to be careful, if we have a good thing, that it be not corrupted by bad influences, which the cultivator can in most cases prevent. In many instances, it may be found proper to mix and cross, and mix again.

I have taken a peach, budded it into the wild plum, then from that into the nectarine, then from that into an apricot, from that back again into a large blue plum, all of which bore fruit, yet different on each tree. It lost its peach furze on the nectarine, and became a free stone on the apricot (being originally a cling).

I have now some ten or more kinds of Italian peaches, the buds all taken from one tree, yet budded into different kinds of stocks, some earlier, some later than the tree from which the buds were taken.

I am prepared to prove these facts if any one denies them, with many more, tending to establish the same law, which every fruit grower ought to know.

I have a hybrid grape—the Catawba grafted into the wild hill grape, which I think is a better bearer, hardier, and less liable to rot than the original—yet the fruit is a complete half and half species, having the qualities in part of both. We must awake, or confusion will reign.

Be careful what kinds of stocks you put your best fruits on. Don't put Rome Beauty, Rawles' Janet and Golden Pippin, on crab stocks or seedlings of an inferior, sickly, bitter or rotten kinds; your fine Italians, President, Alberge, Rareripe, &c. on little, gnarled, tasteless, deteriorated stocks. If the flavor does not suit—cross it. If color or size is objectionable—cross it. But, be careful to unite two good things, and you will not be apt to be disappointed in your hopes.

I have been experimenting for over thirty years, and have learned some valuable lessons. "Prove all things, and hold fast that which is good." I have over one hundred kinds of apples; nearly as many of peaches; eight kinds of grapes; ten or twelve kinds of pears, and a variety of small fruits, for the purpose of testing their different qualities, some of which I am satisfied with—others I have thrown aside as not worth raising.

Our Peach buds killed; many of the trees also. M. W. COLLINS, *Fairfield, Ill.*

ED. VALLEY FARMER:—I wish to procure an individual Right to make and use, the Langstroth Beehive; will you be so kind as to inform me, through the FARMER, from whom such right con be obtained? Is there a Bee Journal published in the United States? if so, I would like to know the address of the Editor, price, &c. Pocahontus, Mo. J. C. W.

[REPLY.—We do not know from whom the Right can be obtained. By addressing R. C. Otis, Kenosha, Wisconsin, you may perhaps ascertain, as he owns the rights for certain Western States. A Bee Journal was started in Philadelphia a couple of years ago, but we believe its publication has ceased.]

The horse chesnut is a native of Thibet.
The cucumber came from the East Indies.
The radish is a native of China and Japan.

[Written for the Valley Farmer.]

MULCHING TREES.

The season for planting trees has arrived, and as many trees die from want of proper attention, and as mulching is one of the most important things to be done when planting, and almost a perfect insurance against the death of newly planted trees, I wish to say a few words on that subject.

This is an old and hackneyed subject, but it is by "line upon line, and precept upon precept," that people have to be taught, and the importance of the subject is a sufficient excuse for any thing that may be said.

Whenever you plant trees, mulch them well: that is, cover the ground around the tree for a space of about three feet from the tree, and three to four inches thick, with wheat straw, leaves, strawy manure, or any such light litter, which may be at hand. It will keep the roots moist and cool, and the earth fine and mellow, and in much better condition than the best cultivation. Trees treated in such a manner are almost sure to grow in any season.

Last spring I planted in St. Louis seventeen evergreen trees, and did not mulch, it being impracticable for me to do so; the severe drouth which we had, killed all but two. At the same time, I planted twenty-five evergreens in Northern Mo. (Lincoln Co.), and mulched as I have described with wheat straw, and all but one lived and made a good growth. The trees were Austrian, White and Scotch Pines, Norway and Hemlock Spruce, &c., from two to six feet high. This will show the great importance of mulching, and I hope persons will give their trees the little extra attention that is needed and which pays so well. E. A. RIEHL.

[REMARKS.—You have called attention to a very important subject. Many people are willing to pay a good deal of money for trees, but are unwilling to spend much time or care in planting and cultivating them. Many of the trees consequently die—this is bad economy.

In applying a mulching, we prefer to wait till the ground gets well warmed by the sun—say till some time in May—provided no drouth has set in, when it should be applied earlier. It is also well to remove the mulch about the trees the latter part of March or 1st of April when it has been previously applied, to let in the beneficial influence of the sun, and then re-apply the mulching in May to protect against the intense heat of Midsummer.—ED.]

The quince came from the island of Crete.

New Mode of Keeping Fruit.

In a late number of the *Ohio Farmer*, there is a communication from Mr. A. F. Brown, of Indianapolis, Indiana, describing the mode of a Mr. Nice, of that place, by which he preserves his fruit in the most perfect manner, far beyond the usual period:

Mr. Nice's Mode of Keeping Fruits.—Some years ago, Liebig discovered the analogy between the slow decay of vegetable substances and fermentation, and settled many things in reference to temperature, moisture and other circumstances under which these actions take place. Subsequent experiments confirmed the deductions of Liebig, and fixed the range of fermentation between 40° and 150° Fahrenheit. Appert a French chemist, introduced the practice of heating vegetable substances to 180° or above, and at that temperature, excluding them from the air, and thus effectually preventing fermentation. This method has now become so common that it has nearly revolutionized the department of domestic economy.

Mr. Nice, of Greensburg, Indiana, a few years since, conceived the idea of availing himself of the margin between the fermenting point (40°), and the freezing point below (32°). His first trouble was the presence of moisture in the atmosphere; this, however, he effectually remedied by the use of chloride of calcium, which by absorbing the moisture, renders the air perfectly dry. Having obtained favorable results, he secured by patent his discovery. In the summer of 1860, Messrs. Fletcher, Williams & Vancamp erected in this city a large house for the purpose of testing the economical value of Mr. Nice's discoveries. As early as ice could be procured last winter, they put their house into operation. About one thousand bushels of apples, consisting of Belleflowers, R.I. Greenings, Rambos, Russets, etc., constituted the first experiment. These were put into the market last June, as perfect in every respect as when they were taken from the tree, and with a very trifling loss in quantity. Last summer, various experiments were made on small fruits, with very encouraging results. Raspberries and strawberries were kept eight weeks, after which they lost their flavor, though they showed no evident marks of decay.

Gooseberries, currants and cherries were kept in good order for a longer period, giving evidence that, with proper care, they may be kept the year round. Peaches, in ten weeks, showed evidence of decay; the skin sloughing without material discoloration. Of pears, about two hundred and fifty bushels were housed, and are now in a fine state of preservation. Among these are the Sugar pear, the Bartlett, Seckel, Flemish Beauty, and several other varieties of summer and fall pears. Present appearances indicate that they will be sound next summer. Grapes that were in good condition when housed have not in the slightest degree changed either their appearance or flavor. A lot from the Cincinnati vineyards, that were much bruised in transportation, suffered loss for the first ten days after being deposited, but have undergone no

sensible change since. The stock on hand is about 150 bushels. I predict that the Company will market grapes next June in good condition. Oranges, lemons, limes, pine-apples, bananas, and other tropical fruits, may be kept for months at any season of the year. Of the last crop of apples, 2,500 bushels are on hand, in a most perfect state of preservation—the Fall Pearmain, Maiden's Blush and Rambo, keeping as well as the Newtown Pippin or Romanite. A small lot of sample apples, of the fruitage of 1860, are on hand, looking well, and retaining their flavor in a remarkable degree.

The results thus far obtained, warrant us in concluding that, in all climates, where ice can be obtained, the standard fruits may be furnished at all seasons of the year, at prices which will bring this luxury within the reach of every family; thus largely increasing fruit consumption, and proportionately stimulating fruit culture.

Thinning Fruit Improves The Flavor.

We abridge, from an article in the *Journal of Horticulture*, the following very judicious remarks by a correspondent, on the propriety of thinning fruit:

"I am quite well aware that I need not tell such men as Mr. Weaver that the flavor of fruit, barring extreme sunless seasons, is entirely under the control of the gardener. A clever man can command flavor; a dull man, when he finds his fruit flavorless, makes idle excuses which should never be listened to. If a tree, trained to a wall, be allowed to ripen, say ten dozen of fruit, when five or six dozen only should have been left, they, although they may be of fair size and color, suffer in flavor to an extent scarcely credible. How often has the gardener had occasion to complain of his pears not being good, although produced on fine trees trained against walls? He complains of the season; but it is in most cases owing to the trees being allowed to bear just double the number they ought to have done. The following ought to be inscribed on every wall, and in every fruit and orchard house:

BY THINNING, YOU MAKE INDIFFERENT FRUIT GOOD. BY CROWDING, YOU MAKE GOOD FRUIT BAD.

If very fine and high flavored fruit is wished for, a tree capable of bearing three dozen of medium-sized peaches should be allowed to bear only twelve or fifteen. This thinning is terrible work for the amateur. It is like drawing a tooth, and every fruit that falls to the ground creates a pang: but it must be done. A small, sharp penknife is the best implement to employ, and is much better than tearing off the fruit with the finger and thumb. A well-formed peach or nectarine tree, be it bush or pyramid, with its fruit properly thinned and nearly ripe, is one of the most beautiful objects the skill of the cultivator can produce. No camelia or orchid, or rose tree, can be more so. Yet this is an object for which some [too many] gardeners feel contempt."

RULES FOR PLANTING TREES.

1. If the roots of a tree are frozen out of the ground and thawed again in contact with the air, the tree is killed.

2. If the frozen roots are well buried, filling all the cavities before thawing any at all, the tree is uninjured.

3. Manure should never be placed in contact with the roots of a tree, in setting it out, but old, finely pulverized earthy compost answers well.

4. Trees should always be set about as deep as they stood before digging up.

5. A small, or moderate sized tree at the transplanting, will usually be a large bearing tree sooner than a larger tree set out at the same time, and which is checked necessarily in growth by removal.

6. Constant, clean and mellow cultivation is absolutely necessary at all times for the successful growth of the peach tree; it is as necessary for a young plum tree, but not quite so much so for an old one; it is nearly as essential for a young apple tree, but much less so for an old orchard; and still less necessary for a middle-aged cherry tree.

7. To guard against mice in winter with perfect success, make a small, compact, smooth earthy mound, nearly a foot high, around the stem of each orchard tree.

8. Warm valleys, with a rich soil, are more liable to cause destruction to trees or their crops by cold, than moderate hills of more exposure, and with less fertile soil; the cold air settling at the bottom of valleys during the sharpest frosts, and the rich soil making the trees grow too late in autumn, without ripening and hardening their wood.

9. The roots of a tree extend nearly as far on each side as the height of a tree; and hence to dig it up by cutting a circle, with a spade, half a foot in diameter, cuts off more than nine-tenths of the roots; and to spade a little circle about a young tree not one-quarter as far as the roots extend and call it cultivation, is like Falstaff's men claiming spurs and shirt collars for a complete suit.

10. Watering a tree in dry weather affords

but temporary relief, and often does more harm than good, by crusting the surface. Keeping the surface mellow, is much more valuable and important! or, if this cannot be done, mulch well. If watering is ever done from necessity, remove the top earth, pour in the water, and then replace the earth—then mulch or keep the surface very mellow.

11. Shriveled trees may be made plump before planting, by covering the tops and all with earth for several days.

12. Watering trees before they expand their leaves, should not be done by pouring water at the roots, but by keeping the bark of the stem and branches frequently or constantly moist.—Trees in leaf and in rapid growth may be watered at the roots, if done properly.

13. Young trees may be manured to great advantage by spreading manure over the roots as far as they extend, or over a circle whose radius is equal to the height of the tree, in autumn or early winter, and spading this manure in, in spring.

14. Never set young trees in a grass field, or among wheat or other sowed grain. Clover is still worse, as the roots go deep and rob the tree roots. The whole surface should be clean and mellow; or, if any crops are suffered, they should be potatoes, carrots, turnips, or other low, hoed crops.

[Written for the Valley Farmer.]

Monthly Hints for Garden and Orchard.

BY CAREW SANDERS.

In the vegetable garden, brisk, is the word this month; the gardener is in the very height of his seeding season; every thing is pressing, as heaps of work want to be attended to at once—but, stop! perhaps March was favorable, and enabled the gardener to get ahead with his work some—happy is he, if it was so. Any how there's plenty to do. If the main crops of roots, parsnips, carrots, salsify, beets, onions, &c. are not sown, they may be done so at once now; these may all be sown together in parallel rows, so as to come under one job in cultivating. Sow in shallow drills, twelve or fifteen inches apart; have the soil in fine tilth; small seeds require to be compactly surrounded with fine soil, to germinate quick, evenly and surely; not too deep by any means—from two inches deep for peas, to one and a half inches; or on the very surface just pressed in, for very fine seeds; but have the soil fine—that's the main thing. Heat and moisture are what quicken seeds into life; the more favorably they can be supplied with these, the more certain and perfect the process becomes.

Onions are a wholesome and useful vegetable, they may easily be grown suitable to the wants of a family in this climate, from the seed; though for a market crop we cannot compete with the people of the North. Sow the seed rather thickly in drills, in rich soil, and let them stand without thinning; they will produce onions large enough for cooking, and plenty of small ones for pickles, for which they are an admirable article. Wethersfield and Yellow Danvers are the best, though Silverskin is best for pickling.

For the main crop of potatoes, I think the Peach Blow stands ahead of all others now, the old favorite, the Neshannock, so long at the top of the heap, and so popular with buyers, must now knock under; at least it has done so, when the former will bring in a Western market fifteen or twenty cents more per bushel. Well, I desire no better potatoe to eat, summer or winter, than the Peach Blow, good size, good yields, quality as above. What a scampering I saw last year, among the old fogy farmers, who had never heard of it before, and were running hither and thither to get seed, supposing it was entirely new and very scarce.

Successive crops of radish, lettuce, peas, spinach, beets, &c. may be sown. Sweet corn and snap beans, also, from middle to end, and preparations made for the great crops which are to succeed, such as cucumbers, squash, melons, tomatoes, Lima beans, and such like tender kinds.

Cabbage plants may be set out from the beginning, and seeds of successive crops sown, of Flat Dutch and Drumhead varieties; also celery seed beds should be attended to at the beginning.

THE FLOWER GARDEN—ANNUAL FLOWERS.

Every body should have a flower garden, for nearly every one loves flowers; and the man or woman that does not love them, is to be pitied; but there are few natures, however rough and uncouth they may be, or how much soever they may be absorbed with the cares of business, the vices or pleasures of the world, that do not yield, in a greater or less degree, to a passion for these most beautiful objects. True, it is only the intelligent and refined, the intellectual and poetical, that can appreciate them as they deserve, and these can and do pay homage to flowers, beyond and above all other earthly things. The flower garden should be deemed of the first importance, influencing as it does the tastes and enjoyment of the family, and leading the youths of both sexes to the appreciation of the beauties of Nature. As a source of pleasant exercise, and recreation to the ladies of the family, the flower garden is indispensable.

The flower garden may be large or small, may consist of a single bed or narrow border, or of acres of flowing lawn, with walks and lakes, groups of trees, shrubs and flowers, and the numerous and wonderful creations of grace and beauty, that art can devise and wealth create. The flower garden can be had and enjoyed by all, and can be adapted to the means and circumstances of the most humble as well as the most wealthy.

Every house in the country should have a grass plat around it, the lovely green of the springing grass forming itself a beautiful object, almost equalling the flowers. The dwellers in towns and cities that are deprived the privilege of a grass plat, miss one of the main essentials to the flower garden, though it is only where they are cramped for room that they need be so denied—for grass, happily, will grow almost wherever flowers will.

Beds of different size and shape, cut out of the turf, form at once the simplest and most graceful flower garden; are accessible, easily kept, and the green of the grass always constitutes a handsome setting or background to the brightest hued flowers.

Flowers for the garden may consist of perennials and others, you may already have roses, lilies, dahlias, and hosts of other permanent shrubs and flowers. If you have, so much the better. If you have none of these, then I want to tell you how a splendid flower garden may be had from annuals alone. Send for "Jas. Vick's (Rochester, N. Y.) Illustrated Catalogue of Seeds and Guide to the Flower Garden;" then send $1.00 or $5.00, or what you can spare, and procure a selection of the best seeds; then follow his directions, cultivate and care for them assiduously, as though you loved them, and took a special interest in their welfare and well doing; and you will be well and abundantly rewarded. I should like to tell what to select first, second, and so on, and some little of the best way to cultivate; but the Catalogue will do that.

For a dozen kinds of the very best, I would select

large packets of mixed colors of the following kinds: Asters, Balsams, Zinnias, Larkspurs, Marigolds, Portulaccas, Phlox Drummondii, Ten Week Stocks, Petunia, Tropeolum, Candytuft; and, for fragrance, Mignonette.

HERBACEOUS PERENNIALS.

Very early in spring is the best time, as I conceive, to remove, divide and replant hardy perennial flowers. The beginning of April will do, though doubtless March is better as a general thing. Some of the advantages this class of flowers possess, are, they are perfectly hardy; most of them bloom early, before the tender kinds or annuals can (though with a proper assortment the blooming season may be prolonged nearly all summer by them alone); they require but little care or cultivation, merely keeping clear of weeds, and every few years, the old stools taken up, reduced by dividing, and reset again in new or fresh ground. Besides, they contain a large variety, and make a fine display, withal. They cannot be entirely dispensed with, notwithstanding that they are old fashioned; but more than that, the florist and hybridizer has been at work at them, and produced many fine strains of varieties; and some new ones of great beauty, have been discovered in other parts of the world in the last quarter century: so that, after all, the dear old "yarbs" are indispensable. Our young friend, Henry Michel, of the Gravois Nursery, has undoubtedly much the finest collection of this class of plants, of any florist in this vicinity. Indeed he makes a specialty of these, together with hardy bulbs and dahlias, as did his worthy and venerable father. I was much pleased in paying a visit or two, to his grounds last spring during the flowering season, to see many new and fine varieties of Antirhinum, Larkspur, Poppy, Aquilegia, Iris, and many others. I would advise all desiring anything in the above line to send for his catalogue or pay him a visit, he is a worthy young man and deserves patronage.

CARE OF ORCHARDS.

Apple orchards that have been neglected, generally have two prominent evils that need correcting. These are, the growth of suckers or sprouts around the base of the trunk, and the tree filled up in the centre with spray, making the foliage so dense that the sun and air cannot circulate through the tree as it should always do. Some orchards, from repeated plowings, have the soil thrown up in mounds around the stem: the suckers may have been cut off annually, yet they spring from below the soil, and are not cut off at the base, hence grow stronger every succeeding year.

The proper tools for this job, are a grubbing hoe and hatchet. Grub around the base of the tree, to the crown of the roots, and break off the suckers at the very base, and close into the tree. Then pare clean with the hatchet, and break off any buds on the stems that may be seen; leave the soil away from them the following season, and if they should sprout afresh during the summer, they can easily be rubbed off, which, if repeated several times during the summer, will prevent their sprouting in future.

The thinning out the head of the tree should not be done in winter or spring, as it will only fill up with water-sprouts, requiring to be cut off annually; trim out in early summer, just as the tree has reached full foliage. Use a fine saw, and pare smooth with a sharp knife; the wounds will not only quickly heal, but it will aid its fruiting, instead of producing watersprouts.

Madder came from the East.
The chesnut came from Italy.
The onion originated in Egypt.
Tobacco is a native of Virginia.
The nettle is a native of Europe.
The citron is a native of Greece.
The pine is a native of America.
The mulberry tree originated in Persia.
The gourd is probably an Eastern plant.

Peaches—Best Varieties for Market.

PROCEEDINGS OF THE OHIO POMOLOGICAL SOCIETY.

After the revision of the catalogue of peaches and the adaptation of the several varieties to the different sections of the State, some discussion was had in regard to the best 10 or 12 varieties ripening in succession, for market purposes; and the Secretary of the society having had some correspondence with peach growers in other parts of the country on this subject, he read extracts from several letters, in substance as follows:

Mr. Isaac Pullen a noted peach grower and nurseryman of New Jersey, says: "I place Hale's Early as the best and earliest peach, and I know of none better than Troth's Early to follow it; then Large Early York (of which I consider Haines' Early, Honest John and Walter's Early, synonyms.) After these come the Crawford's Early and our Yellow Rareripe, ripening close together. Old Mixon Free is the best orchard variety, ripening between Crawford's Early and Crawford's Late; (Bergen's Yellow is too shy a bearer;) then follows Smock and Beer's Smock, which we think is an improvement, and last of all Heath Cling. But there are several excellent market varieties ripening with some of the foregoing, and desirable in many places to make up a greater assortment, or to suit the taste of all customers. I will therefore name some of these in their regular position, as to time of ripening, along with those already mentioned. Those marked with a (*) may be regarded as ripening at one time:

"1 Hale's Early, 2 Troth's Early, 3 Large Early York, *4 Crawford's Early, *5 Yellow Red Rareripe, 6 Old Mixon free, *7 Mary's Choice, *8 Reeves' Favorite, *9 Stump the World, *10 Ward's Late Free, *11 Harker's Seedling, *12 Late Rareripe, *13 Crawford's Late, *14 Smock Peach, *15 Beers' Smock, *16 Crocket's Late White, 17 Late Heath Cling.

"I think so highly of Hale's Early that I have budded forty thousand of this variety the present season. The Cooledge's Favorite is not a good orchard variety with us. The Early Alberge with us is a small yellow peach, ripening nearly with Troth's. The Yellow Red Rareripe is a large, yellow fleshed peach, red outside, ripening with Crawford's Early—this, I suspect, will prove identical with Barnard's Yellow of many catalogues. The Early York (serrate) and Early Tillotson are not worth cultivating in an orchard. Stump the World has produced well with me the past two years, and bears carriage well."

Mr. Batcham remarked that in many parts of the country the name Honest John was applied to the Early Yellow Peach—the Yellow Alberge of Mr. Pullen—as in the following extracts:

FROM A PEACH GROWER AT SOUTH PASS, ILL: "We have had no fruit grown here of Hale's Early as yet, but specimens sent here from Michigan greatly please us. I do not know that Yellow Rareripe has fruited here, but one orchardist has an early yellow peach that he brought here from a Lockport nursery, under the name of Honest John, which is esteemed a very profitable variety. I know of but one good market peach grown here ripening between Crawford's Early and Crawford's Late, that is Old Mixon Free. The best yellow fleshed peach for this purpose is supposed to be Jacques' Rareripe; Bergen's Yellow or Orange, has not fruited here to my knowledge."

From Dr. L. Collins, St. Joseph, Mich: "Our next peach, after Hale's Early, is Wheeler's Early, a rather poor peach, but early, and sells well—then Troth's Early; next Cooledge's Favorite and Honest John (yellow fleshed), a great bearer and fine market peach. Then Large Early York and Crawford's Early, followed by Bergen's Yellow, a remarkably fine yellow peach selling for the highest price, but not a very profitable peach to raise, as it is a shy bearer. Old Mixon Free is a good peach of the same season; Ward's Late Free a little later, and a variety known here as Keyport White stands at the head of all our late white fleshed

peaches (freestone.) It does not ripen till near the last of October, and will stand severe frosts."

List by Mr. Beeler and Mr. Loomis of Indianapolis.—Hale's Early, Troth's Early, Cooledge's Favorite, Large Early York, Crawford's Early, Barnard's Early, Old Mixon Free, Old Mixon Cling, Crawford's Late, Smock, George the 4th of Ia.(?) Heath Cling.

By T. T. Lyon, Plymouth, Michigan.—Hale's Early, (not tested), Troth's Early, Cooledge's Favorite, Large Early York, Crawford's Early, White Imperial, Barnard's Yellow, Old Mixon Free, Crawford's Late, New York Cling.

By F. R. Elliott, Cleveland, Ohio.—Hale's Early, Troth's Early, Cooledge's Favorite, Yellow Rareripe, (Alberge.) Large Early York, Crawford's Early, Sturtevant (of Elliott,) White Imperial, Old Mixon Free, President, Ward's Late, Tippecanoe Cling.

By F. G. Hill of Warren Co., Ohio.—Troth's Early, Large Early York, Crawford's Early, Old Mixon Free, Crawford's Late, Heath Free, Smock Free, Heath Cling.

By M. B. Batcham, Columbus, Ohio—Hale's Early, Troth's Early, Yellow Alberge, Large Early York, Crawford's Early, Old Mixon Free, Old Mixon Cling, Crawford's Late, Stump the World, Late Rareripe, Smock, Heath Cling.

[Reported for the Valley Farmer.]

Meramec Horticultural Society.

EUREKA, March 3, 1864.

The sixty-third monthly meeting was held in the School-House. President Beale in the chair.

The Fruit Committee reported on the table the following varieties of apples: By Mr. Davis, Pryor's Red in very fine condition, and two unknown varieties. Dr. Beale, Jenetons in fine condition. Mr. Harris, Pryor's Red much mellowed, Ortley much past season, Newtown Pippin good and Jeneton fine.

WM. HARRIS, Ch.

Communication received from Mr. P. M. Brown, stating that he had outlined his Essay on Tobacco Culture, when the Essay of Mr. Bradford, published in the "Valley Farmer," came to his notice, and so fully met his views (with a few trifling exceptions), that he thought nothing better could be done than to read and discuss it. Conversation then ensued in relation to the preparation of the soil and sowing the seed beds; the benefit of burning brush on the seed-bed; the influence of the ashes, and the question as to whether burning was a benefit, was discussed. As to curing, whether by fire or by sun, it was agreed that, while the sun cured was most pleasant for domestic use, and was nominally held in high estimation by the dealers; still the high priced grades were in almost every instance fire cured; and, taking the irregularity of the seasons into account, it was the most profitable,

AFTERNOON SESSION.

The question for discussion being, "The best substitutes for the deficient corn and hay crops for early feed for stock."

Mr. Votaw said, his first choice for early pasture, was rye; he had sowed oats last week, and was now sowing May wheat for early pasture to fatten beeves. He tried spring wheat; found May wheat sown before the first of March, produced twenty-two bushels per acre; sown from 7th to 9th about ten bushels; and sown about the 27th of March produced no grain. Oats sown in February has made seventy bushels to the acre. Rye should be sown immediately—two year old seed seldom vegetates. Rye sown early in spring makes better spring pasture than that sown in fall. For fall pasture sow in end of August or early in September. Oats sown now, will ripen in the first days of July.—Wheat can still be sown for pasture and be plowed under for late potatoes or tobacco. Of clean wheat, three pecks to one bushel to the acre.

What is the value of Hungarian? It was agreed the first of May the earliest it could be sown. Should be sown thick, one bushel to the acre, and cut when in the milky state; it then made a fine and nutritive grass, much liked by horses; but if sown thin and let ripen, was coarse and not good for feed.

Planting corn, especially the iron variety for early feed, was advocated both as hay and early corn; for green feed should be cut from twelve to twenty-four hours before using.

Mr. Sledd thinks clover the best green feed, but not available this season if sown this spring.

The Executive Committee reported as the subject for next discussion, "Field crops—their kinds, times and manner of planting." Adopted.

President announced the next meeting to be held at Allenton school house on the first Thursday of April at 10 A. M.

WILLIAM MUIR, Sec'y.

Alton Horticultural Society.

CONDENSED DISCUSSIONS.

SATURDAY, March 5th, 1864.

PRUNING.

Dr. Long would cut off the large limbs of apple trees previous to the middle of March. Smaller limbs he would trim later, when the growth is most vigorous. Dr. Warder and Mr. Whitney's practice is the same.

Mr. Starr prunes in winter or in summer after the leaves are out.

Mr. Burton prunes in winter because the wounds then dry better, and then is the time of most leisure.

Mr. Huggins prefers to prune large limbs in winter, and small ones in June. "In summer for fruit, in winter for wood."

Voted to recommend pruning of large limbs previous to March.

Mr. McPike asked the opinion of the members in regard to shortening in large transplanted trees of Scotch Pine.

F. Starr has practiced shortening in Scotch and Austrian Pines. Does not do so with Norway Spruce.

Mr. Brown thinks it an advantage to thin out limbs of Norway Spruce.

Mr. Huggins would not prune Austrian or Norway Pine branches except to put the tree in shape.

Dr. Hull thinks it important to retain the limbs to preserve the vitality to the tree.

Dr. Long has transplanted the Red Cedar from the bluffs in August, with perfect success.

PRUNING OF GRAPES.

Dr. Hull illustrated pruning by a sample of vine from his vineyard. He trains to two or three stakes—cuts off last year's bearing wood—takes the strongest cane of last year's growth for bearing—counts off about ten eyes and cuts it off. The cane for wood, he cuts down to two or three eyes—leaves say three bunches of fruit to a spur and pinches off, leaving one to three leaves outside the last bunch—does not pinch off the laterals on the wood cane. As regards pruning the present year, he would defer it until we can ascertain more definitely the effect of the cold of January first on the vines. The buds upon his own vines are killed, except upon the lower terraces or other points where they were covered with drifted snow.

Mr. Riehl said that where the buds were all killed, the new growth must start from below the snow line.

EFFECTS OF COLD OF JANUARY FIRST.

Mr. Huggins exhibited sections of peach trees that had passed through the winter of 1855-6. Being of Strong's Mammoth, and Large Early York varieties.—These were rotten at heart, but new wood had formed outside, and the trees had born well since. Thinks that where the present season the bark is alive, that moderate cultivation and cutting back will save the trees. Thinks the Large Early York and Early Tillotson are the most hardy this year.

F. Starr said old trees have suffered most with him; young trees less.

Dr. Hull said that the injury in the winter of 1855-6 was not caused by excessive cold. The thermometer then sinking no lower than 12 degrees below zero.—But in the fall of 1855 the peach and cherry cast their leaves; a new growth was put forth, and small fruit of a second crop formed, and the trees entered the winter in very bad condition. The present winter the preceding sleet caused more injury than the exces-

sive cold. In the case of injury to trees he thinks the injury is thrown off not covered up.

Dr. Hull said trees here on the bluff were but little injured. Heart cherries, contrary to his expectations, had escaped. The wood of the peach of last year's growth was a little discolored.

Mr. Huggins thought trees of medium age, like Dr. Hull's, endured the cold better than younger or older trees.

Mr. Pearson, Mr. Dimmick, and Mr. Flagg, were appointed a committee to select future places of meeting.

The Society then adjourned to meet at Messrs. A. and F. Starr's, on Saturday, April 2d. at 10 o'clock, A. M. W. C. FLAGG, Sec'y.

After partaking of an excellent lunch, the remainder of the time of meeting was pleasantly spent in social intercourse and rambling over the Doctor's fine fruit grounds.

Dr. Hull's farm is situated about three miles above Alton, immediately over the river, on which it looks down from an elevation of some two hundred and fifty feet. The somewhat projecting point affords a view extending from the mouth of the Missouri, to far above the Portage des Sioux on the river; and over the Missouri bottom to the St. Charles' bluffs, on the opposite shore. The somewhat monotonous character of our level prairie State, gives the force of strong contrast to this picturesque view; and meditations upon the present and past along these river cliffs, invest them with the "rime of age," and the romance of history. It was along these rocky shores, if we may believe Indian tradition, that the dread monster of the Pissa preyed upon the red men, and another Curtius offered himself in sacrifice for the welfare of his countrymen. Here came Marquette gliding solitary along the then lonely Father of Waters, and saw the terrible monster painted on the cliffs, two centuries ago. But now the laboring steamer awakens the hollow echoes of the overhanging rock, and the commerce of a thousand towns passes by.

But to the scenic attractions of this locality are added others of a more substantial character. The Loess or Bluff Formation of this part of the Mississippi, is one of the best fruit soils. The confluence of the Mississippi, the Illinois and the Missouri, tempers the severity of frosts; and the elevation of the bluffs throws off the cold airs of Spring and Autumn and the unhealthful moisture of summer.

Here Dr. Hull began his labors in 1859, having sold his first fruit farm west of Monticello to the Messrs. Starr. Those who visited his place during the past Summer, will bear witness to the success which has attended his severe labors. The Peach, the Plum, the Nectarine, the Apricot, the Cherry and the Grape, all grew in great profusion and excellence. For beauty, quality and quantity combined, the orchard was never excelled in the West.

Dr. Hull has now growing

50 Nectarine Trees,		20 Quince Trees,	
450 Apple	"	2,600 Grape Vines,	
200 Pear	"	2,000 Currant Bushes,	
1,500 Peach	"	200 Gooseberry	"
100 Cherry	"	500 Raspberry	"
200 Plum	"	½ Acre Strawberry.	
12 Apricot	"		

One thousand Newtown Pippins are to be added, it is believed the present Spring, and the vineyard will probably receive some accessions.

OSAGE ORANGE SEED AND PLANTS.—We still have inquiries for Osage Orange Seed and Plants, notwithstanding we have stated neither can be had here or elsewhere, that we are aware of. When we get in communication with Texas again, we can get the seed and grow the plants.

[Reported for the Valley Farmer.]

The Mo. State Horticultural Society.

THIRD DAY.

MORNING SESSION.

The meeting was called to order by President Mudd. Prayer offered by Rev. Dr. Schuyler.

PEACH CULTURE.

Being in order, the President called upon Mr. Wm. Hadley, who read an Essay on the Peach, which was, on motion, ordered to be printed with the Proceedings of the Society.

DISCUSSIONS.

Hull: In planting I set the tree at least four inches deeper than they stood in the nursery. Stir the ground three feet deep, and put a wagon load of manure to every six trees, putting the manure down in the ground to feed the roots. I plow quite up to the trees to prevent lateral rooting and develop the deep roots. We have followed the English mode of managing the peach too much. They, having a cold soil and climate, cut off the tap root, plant shallow, and try to develop the surplus roots so as to counteract the cold tendencies of their country. We, having quite a different soil and climate, must act in harmony with it. Subject to excessive heat and drouth, we must deepen and enrich, as we deepen the soil to give a deep growth. The peach is naturally a deep and heavy feeder. I make it a point to trim high enough to let a horse pass under the tree.

We must depend on the plow and cultivator with us, where labor is so high. I have traveled over the ground of low heads, and they nearly broke me up. The difference between high and low heads is felt by my friend Booth. It costs him four times as much to keep the insects off and cultivate that it does me. In pruning I adopt the theory recommended in feeding the hogs. Don't give them as much as will only half feed them. So I don't grow two leaves where only one can develop. Try to prevent competition among them, and prune to keep the trees in check till the seeds are forming and the terminal buds set.

Browning: Will Hull tell us the kind of manure he uses?

Hull: It makes no difference what kind. I thin the fruit so as to throw it as near as possible to the centre of the tree, and judge better by the condition of the fruit than the part of the season. In 1855 from four hundred and fifty trees, five years old, I sold at three dollars a bushel to one man alone $4,600 worth of fruit, besides a few smaller quantities. The short lived theory of the peach is wrong. Well managed trees will outlive you and me. I don't head out the trees by cutting out the central stem. I cut back the long limbs, but prefer cutting an entire limb out.

Husmann has some slight misgivings that Hull's mode of deep planting would not do on Missouri soil. Have grown peaches twelve years, and in my soil such treatment would not only run the roots in the ground, but the trees also. I make my holes eighteen inches deep, and two and one-half to three feet wide. Pulverize the soil, take the trees from the nursery one year old, as small, straight trees as possible. Plant no more than an inch deeper than they stood in the nursery.—Spread out the lateral roots carefully; think the peach feeds quite as much by the lateral roots as the sub soil roots. Cut back to about two feet from the ground.—Prefer to have trees with buds not developed. Let four to five buds grow, giving the tree somewhat of a kettle shape. Thin out the small side branches where they would crowd. Never thin the fruit, head in the young growth, and this mode produces fine fruit, and pays well. About high heads, if the trees grow in our suns, with heads even four feet high, they scorch on the south side, and become short lived. With my two feet stems and open heads, I can gather all my fruit from the centre of the trees.

Long: The method detailed by Hull is very successful. It keeps the worms from the tree. The surface roots are first attacked by the worm, and they then get

into the stem and destroy the tree. I don't plant anything but the peach so deep. In both peach and apple I like high heads.

Hull: In regard to deep planting and manuring as affecting the hardiness of the peach, upon the farm now owned by Starr, I had a man to dig out a large tree, and made an excavation five feet deep. A hog had been killed by a rattlesnake, and the carcass had been thrown into the hole. On it I planted a tree about an inch in diameter, and filled up the hole level. The tree has grown well and is the most fruitful tree on the place. Barry, who heard the statement, was incredulous as to it, and I took him to the spot and dug down to show him it was a fact, and Starr will say it is the best on the farm. In answer to question, the roots of the tree were planted five feet below the surface. I have received trees from abroad that were all dried up, and planted them so deep, and they drew sap into the buds and grew. Best time to plant is spring.—Deep planting gives you time to hunt for the "borer," he has so far to travel before he reaches the roots, and as it is in the roots the injury is first done, this planting is a protection from his ravages.

Smith: From what I know of peach growing, Hull's success must depend on under draining. In the retentive clays of Missouri, such a hole would be like planting in a basin of water. I have planted in holes not more than eighteen inches deep, and they have done well.

Colman: We all know that there is a peculiarity in the soil at Alton. It is a loess upon a sandy sub-soil.

Booth: I commenced about eight years ago. Set a hired man to plant; he set out about fifty trees a day, by making a hole like a post hole, and stuck in the tree. They all died or did poorly. Now, I make a hole three to four feet deep, and make two to three holes a day, and put a wagon load of manure in three holes, and the trees do well. I recommend planting deep.

Smith: I plant mine by the plow and sub-soil plow.

Kelly finds that by planting lower than in the nursery, the stem partakes of the nature of root, and some plant the collar above the surface to make the wood and roots become moody and hard, and the borer will deposit his egg in high as well as low planted trees.

Claggett: There is a tendency to extremes in heading trees high and low. There is something in high heads in the free circulation of the air, which ends the healthy growth of fruit. In some exposed situations low heads are preferable.

Spalding: There is a difference of opinion as to what is a high or low head. Members should say how high the head is from the ground.

Huggins thinks Hull's system may do well with him on the bluffs, but with him on the prairies, it would not do, and such high heads would be ruinous.

Long: I think a peach is a peach, on high ground or low. If you will raise peaches on the low ground, you must drain—you must lead off the surface water by ridges and drains.

Hadley: Deep planting on clay soil is death to the tree, unless underdrained. In regard to the borer, we have over four thousand trees planted in 1856, and have not lost four trees by the borer. We examine every tree and kill the worm, or cut off his claws. He will work upon the tree however deep you plant. He does not always run down, but sometimes runs up, and sometimes all round. In regard to high heads, we have both classes. The finest peaches are always at the top, and the high heads make it difficult to gather. I think two to three feet a good height to gather from, and plow under the trees without difficulty. I seldom like to say how much I make in business, but from four thousand trees we sold $14,000 worth of fruit, but our expenses are heavy. Some of the fruit has brought $8 a bushel in Chicago.

Garber has sold them here at the rate of $7 50 a bushel.

The walnut and peach came from Persia.

Raising Strawberries from Seed.

Ed. Valley Farmer: Last year I raised some three or four hundred strawberry plants from the seed, and I wish to know how I am to transplant them in the spring—all in one bed, or plant separately, that is, in separate beds; as it is my desire to raise (if I can) such a variety or varieties as will benefit the public. The young plants are in fine condition, and some have even put out runners and formed new plants. I do not think less than three-fourths of the seed germinated, and all of seed taken from the finest varieties of fruit, and each variety kept separate; so that if I succeed in raising good fruit, I will know from which sort they are seedlings of.

My way of propagating from the seed is, as far as I know, an invention of my own; simple, yet good, and I have no doubt will be good for all small fruit.

I make a water-tight box of the dimensions of three feet long, two feet wide and six inches deep, (this is made water-tight by caulking or putting a narrow strip of canvass between the joints). Then, I nail on the bottom in each corner a cleat or block six inches long, two inches wide and one and a half inch thick. These are nailed inside the box.

Now make another box, two inches shorter from outside to outside than the inside of the water-tight box, and one half inch narrower and six inches deep. In the bottom of this box bore with a small bit some fifteen or twenty holes. Be careful not to shove the chips out, but, as soon as through, back the bit out, leaving the chips in the hole; now take a coarse seive, say one-eighth inch mesh, and sift this inside box full of rich, black loam; when full take a straight edge, and strike it from end to end, making it level.

Now we will presume all is ready to receive the seed. I procured the seed in this way. I chose such of the strawberries as had the ripest appearance—those having the darkest seed. I let them lay exposed to the air in a room, until the berry is dry, the seed then crumble out of their cavities, by rubbing them gently between the thumb and fore-finger. Now, take the seed and scatter them evenly on the surface of your pulverized or sifted loam, and with your seive barely cover with loam. This seed box is placed inside of the water-tight box, ere its filled, and the under box made level on the ground so as to give an even depth of water on the bottom, leaving at one end all the space you can between the two boxes to pour in your water for irrigation.

Your box is done and your seed in and covered. Now make a water-tight cover of boards four feet long and three feet wide, with hinges or without. Drive a stake in the ground at each corner of the box, letting the top of the two stakes at one end be three inches above the top of the inside box, and the other two nine inches higher at the other end: these are to place your cover on, in case of rain and at night, for if you let rain fall inside or pour water on the bed, it will wash out some of the seed and cover the others too deep, besides have a tendency to rot them.

Next, have water ready standing in the sun to temper it—rain water preferable—and when the seed are in put sufficient water in the lower box to come half way up the seed box, and as it sinks below the bottom of the seed box, and there is no sign of moisture drawn to the surface, put in more water; but not so much as at first, say half the distance up the end of the seed-box. Let the cover remain off whilst the sun shines from sunrise until eleven A. M. and from three P. M. until sunset. No glass is necessary, if followed as directed; and one would be surprised to see how soon the surface will be covered with young strawberry plants.

If you think this worthy of publishing and think it will benefit your numerous readers, why you are at liberty to do so. Why should not such a propagating bed do for vegetables also? *Carondelet, Mo., Jan.* 21, 1864. IMPROVEMENT.

A New Way to Propagate Grape Vines.

On looking through a file of French papers recently we found the following:

"The best way to propagate the grape vine, undoubtedly, is the system recently discovered by M. Fabvier, a celebrated vigneron of the Haut Garronne. He selects the strongest of last year's shoots, as soon as the leaves fall in autumn, and cuts out the eyes, with about a quarter of an inch of wood above and below the bud at that season. He then mixes an abundance of earth with them, and sets them in a cool cellar for the winter. As soon in spring as the ground will work, he sets the buds two inches deep under ground, and about nine inches apart in the rows, covering the depth of two inches above the eye with very rich soil. The vines so produced, are equal in strength to one year's growth, to the strongest layers of the same age."

Now, there does not seem to an American much novelty in raising grapes from eyes; nine-tenths of the grapes sold here, being so raised; but there is for all a little novelty in successfully raising them this way in the open air. The trouble with us has been, that in open air attempts, we imitate our hot-house practice, and set the bud just level with the surface of the ground, and our warm summer sun soon settles that business. The buds dry out before the roots get deep enough to save them. We doubt if any American propagator thought of putting a bud two inches under ground, or dreamed, if he did, that a bud would manage to push through that thickness of soil.

Perhaps they will. It is at any rate worth the trial. If really good one year vines can be had from eyes in the open ground, it will be a much cheaper way of raising grapes than that now generally followed; and the plants, without doubt, would be considerably healthier.—[Gardener's Monthly.

Domestic Department.

BEESWAX.—To separate beeswax from the comb in the best manner. Tie it up in a linen or woolen bag, with a pebble or two to keep it from floating; place it in a kettle of cold water and place over the fire, as the wax melts it rises to the surface, while all the impurities remain in the bag.

FOWLS.—In winter hens should be fed in part with potatoes, turnips, carrots, cabbage, etc., to supply the want of seeds and grass they obtain in summer, also lime and pebbles should be put within their reach.—This treatment will cause them to lay in winter. Bones, egg shells and soaked corn are good.

PRESERVATION OF THE DEAD.—The beneficial effects of this are experienced in the case of keeping bodies for the recognition of friends. A solution of alum in hot water, in the proportion of two pounds to a pint, is injected through the right carotid arteries and veins throughout the whole body. In summer three quarts of the solution are required, and in winter less. This is to preserve the body in its original state.

CEMENTING GLASS OR CHINA.—Provide some very finely powdered quicklime in a muslin bag. Take the broken ware and rub the edges with the beaten white of an egg. Take the lime and sift it thick over the edge rubbed with egg, press and bind the pieces together, and let them remain several weeks. For coarse crockery, rub the parts with white paint, made of white lead and linseed oil, press and bind until fully dry. They will last as long as new.

CEMENT FOR STOVE PIPES.—Cracks in stoves and pipes may be closed by a paste made of salt, ashes and water. Iron filings, sal ammonia and water, make a harder and more durable cement.

LABOR-SAVING SOAP.—Take two pounds of sal soda, two pounds of yellow bar soap, and ten quarts of water. Cut the soap in thin slices, and boil together two hours, strain and it will be fit for use. Put the clothes in soak the night before you wash, and to every pail of water in which you boil them, add a pound of soap. They will need no rubbing, merely rinse them out, and they will be perfectly clean and white.

COCK-ROACHES.—Procure from the druggist a small quantity of poke-root, boil in water till the juice is extracted, mingle the liquor with molasses, and spread it on large platters or soup plates in places where they visit, and they will be slain by hundreds in the following morning. The root after being boiled, laid in closets, etc., will prevent their troubling you.

A DELICATE CEMENT FOR GLASS OR CHINA.—One ounce of mastic and as much spirits of wine as will need to dissolve it. Soak an ounce of isinglass in water until quite soft, then dissolve it in rum or brandy until it forms a strong glue, to which add a quarter of an ounce of gum ammonia, well rubbed and mixed. Put the two mixtures together over a gentle heat until united, and keep in a vial well stopped. When used, place the vial in a kettle of warm water, warm the glass or china, and apply the cement, carefully fitting it together, keeping it close for twelve hours at least, it will then be sound, and the place scarcely perceptible.

REMOVING PUTTY.—Moisten the putty with nitric or muriatic acid, and it may be removed at once. Strong soap will answer the same purpose.

CANDIED LEMON OR PEPPERMINT FOR COLDS.—Boil one pound and a half of sugar in a half pint of water till it begins to candy round the sides, put in eight drops of essence. Pour it upon buttered paper and cut with a knife.

[Written for the Valley Farmer.]

MOTHER'S WORK BASKET.

Ah, here is my mother's old basket,
Which always held work for the week—
And whatever we children wanted,
We always came hither to seek.
If Harry had broken his kite string,
Or Willie's old fish-line gave out—
They came for repairs to the basket,
And tumbled its contents about.

In the top were bundles of sewing,
And happy children were we;
Were there jackets for Will and Harry,
Or aprons for Anna and me?
And those bright but forbidden scissors,
Which tempted us so, were beneath;
And some pieces of golden beeswax,
All checked with the print of our teeth.

How Anna kept dollie in fashion,
(Perhaps less becoming than gay),
With bits which she got from the basket,
And worked to advantage some way.
Ah, me! little Anna was fairest—
And soonest her journey was o'er:—
Now Will and Harry are bearded men,
And I—I am least of the four.

Oh, where is there jeweled casket,
Or talisman equal to this!
My mother's old willow work-basket,
With its memories painful bliss.
I think of the days of my childhood,
And weep as I could not weep then,
For I had a mother who loved me,
As no one will love me again.

COUNTRY GIRL.

Passions, like wild horses, when properly trained and disciplined, are capable of being applied to the noblest purposes; but when allowed to have their own way, they become dangerous in the extreme.

Dress has a moral influence upon the conduct of man and woman kind. Let any lady or gentleman be found with dirty gaiters or boots, old cloak or surtout, soiled collar or neckcloth, dirty undersleeves or wristbands, with a general negligence of costume, and he or she will in all probability, exhibit a corresponding negligence of *address*.

THE HAPPY MILKMAID.

* * She doth not, with lying long a-bed, spoile both her complexion and condition.—Nature hath taught her, too immoderate sleepe is rust to the soule; she rises therefore with Chaunticleare her dame's cock, and at night makes the Lambe her Curfew. In milking a Cow, a-straining the Teats through her fingers, it seems that so sweete a Milk-presse makes the Milk whiter or sweeter; for never came Almond Glove or Arromatique oyntment on her palme to taint it. The golden eares of corne fall and kisse her feet when shee reapes them, as if they wisht to be bound and led prisoners by the same hand that fell'd them. Her breath is her own, which sents all the yeare long of June like a new-made Haycock. She makes her hand hard with labour, and her heart soft with pitty; and when winter evenings fall early (sitting at her mery wheel), she sings a defiance to the giddy wheele of Fortune. She doth all things with so sweet a grace, it seems ignorance will not suffer her to doe ill, being her mind is to doe well. Shee bestowes her yeare's wages at next faire; and in chusing her garments, counts no bravery i' th' world like decency. The Garden and Bee-hive are all her Physick and Chyrurgerye, and shee lives the longer for 't. She dares goe alone, and unfold sheepe i' th' night, and feares no manner of ill, because she meanes none; yet to say truth, she is never alone, for she is still accompanied with old songs, honest thoughts, and prayers, but short ones; yet they have their efficacy, in that they are not pauled with insuing idle cogitations. Lastly, her dreames are so chaste, that shee dare tell them. * * Thus lives shee, and all her care is that shee may die in the spring-time, to have store of flowers stucke upon her winding-sheet.—*Thomas Overbury.*

TRUE HOSPITALITY.—I pray you, O excellent wife, cumber not yourself or me to get a curiously rich dinner for this man or woman who has alighted at our gates; nor a bed-chamber made at too great a cost. These things, if they are curious in them, they can get for a few shillings in any village. But rather let the stranger see, if you will, in your looks, accents and behavior: your heart and earnestness, your thought and will, which he cannot buy at any price in any city, and which he may well travel twenty miles, and dine sparely and sleep hardly, to behold. Let not the emphasis of hospitality lie in bed and board; but let truth and love and honor and courtesy flow in all thy deeds.

Avoid the gossiper as you would the hissing snake.

A DOG OF ST. BERNARD.

Some of the grandest scenery in nature is to be found among the Alpine regions of Europe. Those who have traversed the Alps have not only witnessed some of the greatest of God's works, but have there found men in whose hearts was implanted a holy reverence for their Maker and love for their fellow creatures, whose deeds of humanity and self-sacrifice should make their names greater than those of the most celebrated statesman or hero.

Near one of the most dangerous passes in these mountains (where they form the dividing line between Switzerland and Savoy) is situated the convent of St. Bernard; the monks who inhabit it, are always hospitable to strangers, and unwearied in their exertions for the recovery of travelers who may be overtaken by a storm. In these regions the changes are very sudden; and often after a most beautiful day, when the reflection from the fields of snow is almost blinding to the eyes, the glaciers shining like so many peaks of glass in the sunlight, a furious storm may arise, so that, in a very short time, the roads will be blocked up with the drifting snow, the avalanches roll down into the valleys, sweeping everything before them, while the unfortunate traveler, weary, and having lost his path, is soon overcome with the cold—perhaps covered in a snow drift.

At such times as these, the monks go forth, to rescue any who may be in danger; and their most valuable assistants are the noble Alpine mastiffs, to whose sagacity many a traveler is indebted for his life. Even when a man is buried to the depth of several feet in the snow, the delicacy of smell with which these animals are possessed is such that they generally find them; and, if life is not extinct, the flask of spirits, or some restorative (which the monks have placed in the basket around the dog's neck), are often invaluable. Children have sometimes been found by these dogs and carried on their backs to the convent door, where they pulled the bell for admittance with their teeth.

There are men now in Europe, and perhaps in America too, who owe their lives to the noble-hearted monks, and their faithful dogs, of the Convent of the Great St. Bernard.

Men of the noblest dispositions think themselves happiest when others share their happiness with them.

Editor's Table.

Proceedings Mo. State Hort. Society.

The Proceedings of the above Society are printed and ready for delivery. They embrace 148 pages of valuable matter, which should be in the hands of every horticulturist. We will send a copy free to every person who forwards to us the names of two new subscribers and two dollars. The price of this pamphlet is 50 cents. Any one of our subscribers can, with a little exertion, procure two subscribers in their own neighborhoods, and thus obtain this interesting and valuable digest of horticulture.

Fruit Lands—Something New.

We have almost daily applications for farms—particularly fruit farms. Many people from other States, appreciating the adaptability of this State for the production of fruit, have determined to locate here, and are in the pursuit of fruit farms. We always regret, when such persons call, that we have not in our possession more specific information—that we cannot tell them, Mr. A, or B or C, on such a railroad or river, has a farm containing a certain number of acres, with certain improvements upon it, which he desires to sell at a certain price, upon certain payments.

In order that we may give this information hereafter to all who may call, we have determined to open a book, in which any person having a farm to sell, can describe it, giving all the particulars, stating price, &c. We shall make no charge for this. It will give us a good deal of labor and trouble, but we are anxious that our hillsides shall be covered with orchards and vineyards; and are willing to undergo the labor.

Persons forwarding letters must state their lowest price, give their names, tell by what route their farms can be reached, at what stations to stop, &c. No attention will be paid to letters failing in any of these particulars. We require this to save the time that would be required in answering questions.

Not only is there inquiry made for fruit farms, but for stock farms, and farms for general agricultural purposes. When our State becomes better known, it will be found that it surpasses all other States in her adaptibility for the production of all kinds of fruit; for ease and cheapness with which stock can be raised; for the immense yield of her crops, and for the superior quality of her hemp and tobacco lands. In mineral resources all know she is without a competitor.

The lands in this State are now cheap—very cheap—and this is another inducement to the enterprising settler.

We will copy letters containing description of farms in this book. If any of our readers know of persons having farms to sell, and wish to get enterprising neighbors, they had better obtain descriptions and forward them to the Editor of this Journal.

The Buffalo Strawberry.—The following is Mr. N. S. Smith's method of cultivating this Strawberry. It is written in reply to a letter from Hon. C. B. Lord of this city:

"For the garden, trench deep, with old, rotten manure. Set in rows two feet apart, eighteen inches in the row. Winter protection of course dry straw. Let them fruit what they will. But keep off the runners, and the soil clean from weeds.

For field culture, plow deep, and use plenty of old rotten manure—no fresh manure for strawberries. Set in rows four feet apart and two feet in the row. In field cultivation, let the runners grow and multiply plants; but keep the soil free from weeds and grass. Keep an open space of two feet between the rows, with a horse cultivator.

Rev. J. Knox, of Pittsburg, has a 50 acre strawberry field. There are now 100 Am. Strawberry fields in Maryland. The Buffalo is equally good for the garden or field. For either, the Buffalo Strawberry cannot be equalled. It is very hardy, a vigorous grower, great fruiter. Fruit very large and beautiful, very palatable, high flavor, and firm for transportation."

Corn Flour—Ed. Valley Farmer: Is there a corn called Flour Corn; if so, what are its qualities, and will it do as a substitute for wheat, and where can it be had? Barnesvile, Mo. S. Moran.

[Reply.—There is a corn called Flour Corn. It is white and very hard, and makes a very white meal.—On this account it is called flour corn. It is a substitute for wheat, but no more than any other corn meal. It is not wheat flour by a long ways. We presume, you can obtain it either of Plant & Bro.; Blunden Koenig & Co., or Barnum, Fenner & Co. Seedsmen at St. Louis.]

Black Spanish Fowls.—Attention is called to the advertisement of these Fowls which appears in another column. Mr. Silver has for years made the natural character of the fowl his study, and is said to keep the finest assortment.

Ed. Valley Farmer: Wheat looks very bad, although we can't tell how much it is injured until the warm weather starts it up again. Weather cold and dry, with high winds. Some plowing done the first of the month, but none since. Considerable activity is shown here in setting out grapes—in a small way.

Hannibal, Mo., Mar. 25, 1864. S. F. T.

SUGAR FROM SORGHO.

Can Sugar be made from Sorgho? is a question asked by every one to whom the subject is referred.—But this is not the issue—Sugar has been made from it by Prof. Lovering, of Philadelphia, in 1851; by Hedges, of Ohio, in 1858; by Belcher, of Chicago, and many others unknown to the writer, which shows conclusively that sugar has been made from it.

But the more important question is asked, Is there any simple process by which the FARMERS can make their own sugar, without the long, expensive, and tedious process of filtering through BONE-BLACK, as recommended by Lovering?

We answer emphatically, there is. J. F. RIGGS, formerly of Illinois, latterly of Fremont, Dodge Co., but now of Omaha, Douglas Co., Nebraska, has been experimenting for six years upon this point, and has discovered a process by which every farmer can make and refine his own sugar with as little cost and trouble as to make butter or cheese. His process does away with all expensive machinery.

Patented by J. F. Riggs, January, 1864.

RIGGS, NAVE, McCORD & CO., Proprietors, Omaha, Douglas Co. Nebraska. 12[aplipd

N. E. Mo. Horticultural Society.—Society met February 26th. President John Fry in the chair.

Society proceeded to a permanent organization, by electing W. L. Youse President, Jno. P. B. Forman Vice-President, and S. F. Taft Secretary.

On motion of O. H. P. Lear, the President was requested to act as Treasurer.

J. N. Peyton made a report on the damage done to the grape. He thinks that when they were not covered with snow, the vines are considerably injured.—The prospect for a crop the coming season, he thinks is light; does not expect more than one-fourth of a crop. Here followed a long talk about his experience with the grape, the main features of which was—subsoil your ground 20 inches deep—plant 4 by 6 feet—and that he had found grape growing very remunerative.

O. H. P. Lear made a report on the damage done the apple, pear, peach, &c. Apple not injured, as he can discover. Pear—fruit buds mostly killed—wood not much injured. Peach—fruit buds dead, wood badly injured; some trees split by the frost; bark above snow line looks as though it was cooked. Improved Cherries—fruit bud dead; wood shows but slight injury. Morello and Pie Cherries—fruit bud and wood all right.

John Fry made a report on the small fruits. He thinks they are not injured as yet, the snow having protected them—if any were not covered they are probably killed.

Meeting adjourned to meet on the second Saturday of April at 2 o'clock, P.M. S. F. Taft, Sec.

Fish's Patent Lamp Cooking Apparatus.—This is an economical contrivance. By an ingenious combination of utensils, with a common coal oil lamp, the operations of boiling, frying, stewing and steeping are performed at a cost of one cent an hour. There are four sizes, holding from a quart to a gallon. Hall's Journal of Health thus speaks of it, and the uses to which it may be applied:

"Health, comfort, and economy--which are all largely promoted by the use of an apparatus patented within the present year by Warren L. Fish, for boiling, frying, stewing, and steeping food, and toasting bread, with the flame that lights the room, at a merely nominal expense. There is no dust, dirt, or ashes, and the varying circumstances to which the apparatus is applicable, would be scarcely conjectured at first sight; it is handy for young and old, for sick and well, for the laborer and the student, night or day, summer or winter. A single match will put it in operation instantly, and in fifteen minutes cold water is made to boil. In summer time, none but actual laborers ought to take anything for breakfast and supper but cold or toasted bread and butter, and a cup or two of hot tea or coffee, which can be prepared at the cost of a cent or two for the whole family. By having one of these lamps a clerk or student could save ten times or more the price of the lamp in a year, by simply preparing his own breakfast, while persons who board, or go to the country for the summer, would by its use be able to add greatly to their comfort by preparing their own tea or coffee, and little delicacies in case of sickness. But as an article for the sick room and the nursery, this lamp is invaluable; no mother of a growing family, if she knew its value, would be willing to do without it for a single day, simply because any child is liable to be taken sick any night and in almost all the illness of childhood warm water is more or less necessary. It is a prompt and perfect cure for croup; but as a convenience for the sick room in general, Fish's Lamp is literally invaluable. For hospital, tent or barrack, for camping out, pic-nics, a-fishing, etc., it is an article of comfort beyond all proportion to its cost."

Sold wholesale and retail by G. W. Curtis & Co., Coal Oil and lamp dealers, No. 7 South Fifth street, manufacturers' agents for Saint Louis.

CONTENTS OF NO. 3.

Agricultural.

Curing Tobacco, - - - - 97
Essay on Hemp Culture, - - - 98
New Method of Suckering Tobacco; A Crop of Corn; Hedges; - - - - 100
Love for Our Business; Farm Implements and Machinery, - - - - 101
Something Farmers Need; Raising Buildings, 102
Agricultural Items, - - - 103
Fertilizers; Onion Culture; Sorgho; Vandiver's Corn Planter, - - - - 104

Stock Department.

Milch Cows, - - - - 105
Doctoring Sick Animals; Worms in Horses, 106
Mad Itch; A Thoroughbred Horse, - 107
Disease Among Sheep, - - - 108
Salting Cattle; Milking, - - - 109

Horticultural.

A Description of Some of Our Grape Vines, 110
Pears—Best 14 Varieties; Grafting Grape Vines, 112
New Grapes, - - - - 113
Stocks Affect Varieties; Pruning Young Trees, 114
Mulching Trees; New Mode of Keeping Fruit, 115
The Flavor Thinning Fruit Improves; Rules for Planting Trees, - - - 116
Monthly Hints for the Garden and Orchard, 117
Peaches—Best Varieties for Market, - 118
Meramec Horticultural Society, - - 119
Alton Horticultural Society, - - 119
Mo. State Horticultural Society, - - 120
Raising Strawberries from Seed, - - 121
A New Way to Propagate Grape Vines, - 122
Domestic Department, - - - 122

Home Circle.

Mother's Work Basket; The Happy Milkmaid, 123
A Dog of St. Bernard, - - - 124

Editor's Table.

Fruit Lands; The Buffalo Strawberry, - 125
N.E. Mo. Horticultural Society; Fish's Patent Lamp Cooking Apparatus, - - 126

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dwarfs, "	50	40.00
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APRICOT and NECTARINE, Splendid trees, first class,	40	
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GOOSEBERRIES, Strong plants,	$0.10	$1.00 $6.00
CURRANTS, Red and White,	10	1.00 8.00
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	Hund.	*Thous.*
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